



ARITHMETIC



with
MEANING



GRADE

4

McCARTHY

Arithmetic *with* Meaning

GRADE

4

by

J. P. McCarthy, M.A., Ed.D.

Principal, Nova Scotia Normal College

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and Prince Edward Island; approved for permissive
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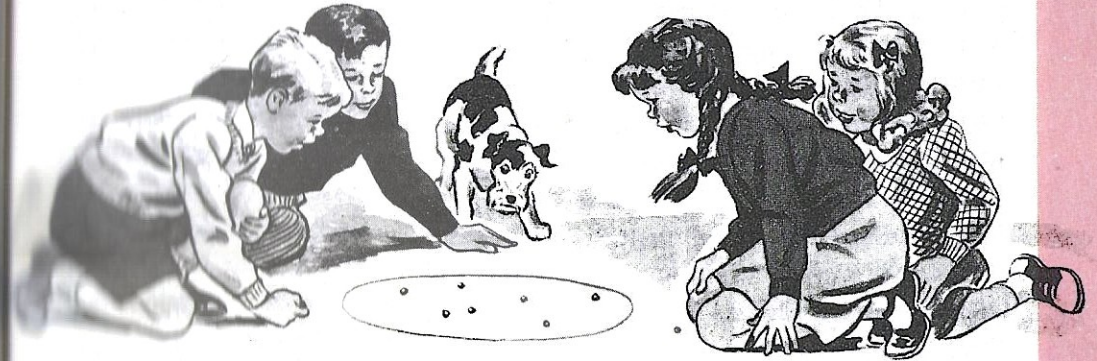
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SAVING TIME DOING ARITHMETIC

You can save a lot of time and get more practice in addition and subtraction if you do not copy the exercises from the text into your note books or scribblers.

Hold a sheet of paper under the first row of exercises and write the answers on it. When you have finished the first row of answers fold these answers under. Now hold the folded edge under the second row of exercises and write the answers. Fold these answers under and write the answers for the third row. Do the same for each other row. Be sure to write the number of each row before you write the answers.

The folded paper below will show you how to save time in addition and subtraction.

1.	46	45	74	55	98	67
	87	63	48	99	35	60
1.	133	108	122	154	133	127
2.	62	71	95	66	93	84
	- 48	- 46	- 27	- 38	- 49	- 35
2.	14	25	68	28	44	49

IT PAYS TO SAVE TIME



STARTING GRADE FOUR

"Welcome to Grade Four, girls and boys! I'm glad to see you here early; it shows that you are anxious to get a good start in your new work.

"You will be starting Grade Four Arithmetic. And in Arithmetic, you know, you work with numbers. Look at the picture on the left. Here are some easy questions that will remind you that *numbers are used every day by everybody* in some way or other."

1. How many boys are on the school walk? How many girls are on the school walk? How many boys and girls are there altogether on the school walk?

2. How many boys are there on the sidewalk? How many girls are there on the sidewalk? How many boys and girls are there altogether on the sidewalk?

3. How many windows do you see in the school?

4. What time is it by the school clock?

5. On the first day, school went in at 9 o'clock and was dismissed at 12. How many hours of school were there the first day?

6. The school walk is 60 feet long. How many yards long is it?

7. There are 40 pupils in Grade Four and each pupil has a desk of his own. If there are 5 rows of desks how many pupils sit in each row?

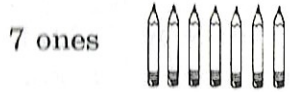
8. How many Arithmetic books will a Grade Four class of 30 need? How many piles, with 10 books in each pile, will that be?

9. Some pupils come to school by bus. How much will 5 bus tickets cost if each ticket costs 7 cents?

THE MEANING OF NUMBERS

In arithmetic we work with numbers so it is very important for us to know what they mean.

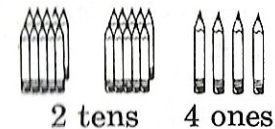
7 is a *one-figure number*. It means a group made up of 7 *ones*. On the left you see 7 pencils. Altogether there are 7 pencils.



All the numbers from 1 to 9 are one-figure numbers.

Meaning of 24: 24 is a *two-figure number*. The right-hand figure 4 means 4 *ones* and the 2 means 2 *tens*. The 2 really means 20 which is 2 tens. As you can see in the box, 24 is made up of 2 tens and 4 ones.

20
4
—
24



On the left you see 24 pencils.

All the numbers from 10 to 99 are two-figure numbers.

Meaning of 638: 638 is a *three-figure number*. The right-hand figure, 8, means 8 *ones*; the second figure from the right, 3, means 3 *tens*; and the third figure from the right, 6, means 6 *hundreds*. The 3 really means 30 (which is 3 tens) and the 6 really means 600 (which is 6 hundreds). As you can see in the box, 638 is made up of 6 hundreds, 3 tens, and 8 ones.

600
30
8
—
638

All the numbers from 100 to 999 are three-figure numbers.

Do not use "and" in reading whole numbers. 638 is read: *six hundred thirty-eight*.

1. Tell what each of these numbers means: 6, 13, 54, 279, 150, 482, 716.
2. Read these numbers: 371, 524, 935, 763, 409, 705.

THE MEANING OF LARGER NUMBERS

Neil read in last night's paper that the population of Newton was 5419. Let us learn what 5419 means.

5419 is a *four-figure number*. The right-hand figure, 9, means 9 *ones*; the second figure, 1, means 1 *ten*; the third figure, 4, means 4 *hundreds*; and the fourth figure, 5, means 5 *thousands*. The 1 means 10 which is 1 ten; the 4 means 400 which is 4 hundreds; and the 5 means 5000 which is 5 thousands. As you can see in the box, 5419 is made up of 5 thousands, 4 hundreds, 1 ten, and 9 ones.

Meaning of 5419

5000
400
10
9
—
5419

All the numbers from 1000 to 9999 are four-figure numbers.

5419 is read: *five thousand four hundred nineteen*.

1005 is read: *one thousand five*.

Mary's father told her that his cows gave 43567 pounds of milk last year. What does 43567 mean?

43567 is a *five-figure number*. Each figure has a place name. Starting at the right, the first place is *ones*. It tells how many *ones* there are in the number. Below you see the names of all the places. They tell how many *tens*, *hundreds*, *thousands*, and *ten-thousands* are in the number.

ten-thousands thousands hundreds tens ones
4 3 5 6 7

Meaning of 43567

40000
3000
500
60
7
—
43567

All the numbers from 10000 to 99999 are five-figure numbers.

43567 is read: *forty-three thousand five hundred sixty-seven*.

12043 is read: *twelve thousand forty-three*.

25004 is read: *twenty-five thousand four*.

READING AND WRITING NUMBERS

1. Read these numbers and tell what each figure in each number means:

83, 17, 256, 309, 740, 1428, 2072,
4005, 35614, 68073, 70015

2. What does 4 mean in each of these numbers:

3724, 1043, 5490, 4681

3. Count from 1000 to 1030; from 3000 to 3025; from 10000 to 10020.

4. Write in figures:

- five hundred forty-two
- six hundred nine
- three thousand, two hundred seventeen
- two thousand, one
- thirty-seven thousand, two hundred fifty-one
- ten thousand, six hundred seven

5. Read these sentences:

- There are 365 days in a year.
- There are 5280 feet in one mile.
- The Queen Mary carried 2461 people on one trip.
- The St. Lawrence River is 1900 miles long.
- The highest mountain peak in Canada is 20300 feet high.
- The Atlantic Ocean is 12880 feet deep in places.

Very often a comma is put between the hundreds' place and the thousands' place in four-figure numbers. Hence 7462 may be shown as 7,462 and 35208 may be 35,208. The same applies to numbers when written out; for example, 7462 would be seven thousand, four hundred sixty-two.

6. Read these numbers: 6,821; 54,263; 18,704; 39,056.

SPECIAL WAYS OF READING NUMBERS

Numbers usually tell us "how many" things we are talking about or "how big" they are. They stand for *quantity or size*.

However, numbers are also used to *identify* things. For example, telephone numbers, automobile license plate numbers, box-car numbers, and house numbers are used so we can "pick out" the one we are talking about. When numbers are used in this way they do not tell us "how many" or "how big". A big automobile may have a small number on its license plate and a small automobile may have a large number on its license plate. When numbers are used to "pick out" things they are read in a special way, usually by saying the figures in order and by reading 0 as "oh" and not as zero.

The telephone number 6047 is read: *six—oh—four—seven*.

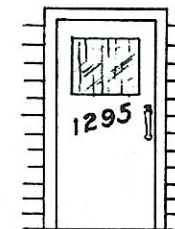
The automobile license plate on the right is read: *eight—five—two—six—one* or *eight—fifty-two—sixty-one*.



The house number 1295 is read: *one—two—nine—five*, or *twelve—ninety-five*.

The year 1950 is usually read: *nineteen—fifty*.

The year 1802 is usually read: *eighteen—two* or *eighteen—oh—two*.



Read these sentences:

- Mr. Jones' automobile license number is 6-40-34.
- I live at 203 Queen St.
- The goods arrived in box-car 642,108.
- The Second World War ended in 1945.
- Queen Victoria died in 1901.
- What is the number of your telephone?

EASY ADDITION FACTS AND ADDITION WITH ZERO

Here are the 45 easy addition facts which you learned before. Study them by blocks. Also shown is addition with zero.

$\begin{array}{r} 2 \\ 2 \\ \hline 4 \end{array}$	$\begin{array}{r} 2 \quad 1 \\ \hline 1 \quad 2 \\ 3 \quad 3 \end{array}$	$\begin{array}{r} 1 \\ \hline 1 \\ 2 \end{array}$	$\begin{array}{r} 3 \quad 1 \\ \hline 1 \quad 3 \\ 4 \quad 4 \end{array}$	$\begin{array}{r} 4 \quad 1 \\ \hline 1 \quad 4 \\ 5 \quad 5 \end{array}$	$\begin{array}{r} 3 \quad 2 \\ \hline 2 \quad 3 \\ 5 \quad 5 \end{array}$	
$\begin{array}{r} 3 \\ 3 \\ \hline 6 \end{array}$	$\begin{array}{r} 5 \quad 1 \\ \hline 1 \quad 5 \\ 6 \quad 6 \end{array}$	$\begin{array}{r} 5 \\ \hline 5 \\ 10 \end{array}$	$\begin{array}{r} 4 \quad 2 \\ \hline 2 \quad 4 \\ 6 \quad 6 \end{array}$	$\begin{array}{r} 4 \\ \hline 4 \\ 8 \end{array}$	$\begin{array}{r} 6 \quad 1 \\ \hline 1 \quad 6 \\ 7 \quad 7 \end{array}$	$\begin{array}{r} 4 \quad 3 \\ \hline 3 \quad 4 \\ 7 \quad 7 \end{array}$
$\begin{array}{r} 5 \quad 2 \\ \hline 2 \quad 5 \\ 7 \quad 7 \end{array}$	$\begin{array}{r} 7 \quad 1 \\ \hline 1 \quad 7 \\ 8 \quad 8 \end{array}$	$\begin{array}{r} 8 \quad 1 \\ \hline 1 \quad 8 \\ 9 \quad 9 \end{array}$	$\begin{array}{r} 6 \quad 2 \\ \hline 2 \quad 6 \\ 8 \quad 8 \end{array}$	$\begin{array}{r} 5 \quad 3 \\ \hline 3 \quad 5 \\ 8 \quad 8 \end{array}$	$\begin{array}{r} 9 \quad 1 \\ \hline 1 \quad 9 \\ 10 \quad 10 \end{array}$	
$\begin{array}{r} 7 \quad 2 \\ \hline 2 \quad 7 \\ 9 \quad 9 \end{array}$	$\begin{array}{r} 8 \quad 2 \\ \hline 2 \quad 8 \\ 10 \quad 10 \end{array}$	$\begin{array}{r} 6 \quad 3 \\ \hline 3 \quad 6 \\ 9 \quad 9 \end{array}$	$\begin{array}{r} 5 \quad 4 \\ \hline 4 \quad 5 \\ 9 \quad 9 \end{array}$	$\begin{array}{r} 7 \quad 3 \\ \hline 3 \quad 7 \\ 10 \quad 10 \end{array}$	$\begin{array}{r} 6 \quad 4 \\ \hline 4 \quad 6 \\ 10 \quad 10 \end{array}$	

ANY NUMBER AND ZERO GIVES THE NUMBER

0	1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0	0
0	1	2	3	4	5	6	7	8	9

ZERO AND ANY NUMBER GIVES THE NUMBER

0	0	0	0	0	0	0	0	0	0
1	2	3	4	5	6	7	8	9	
1	2	3	4	5	6	7	8	9	

When we put things together we ADD. The sign for addition is + and means and or plus. The answer in addition is called the sum.

Add down and check each exercise by adding up.

- $\begin{array}{r} 663 \\ 312 \\ \hline \end{array}$
 $\begin{array}{r} 930 \\ 145 \\ \hline \end{array}$
 $\begin{array}{r} 716 \\ 180 \\ \hline \end{array}$
 $\begin{array}{r} 514 \\ 535 \\ \hline \end{array}$
 $\begin{array}{r} 340 \\ 708 \\ \hline \end{array}$
 $\begin{array}{r} 402 \\ 692 \\ \hline \end{array}$
- $\begin{array}{r} 821 \\ 236 \\ \hline \end{array}$
 $\begin{array}{r} 571 \\ 104 \\ \hline \end{array}$
 $\begin{array}{r} 240 \\ 852 \\ \hline \end{array}$
 $\begin{array}{r} 501 \\ 440 \\ \hline \end{array}$
 $\begin{array}{r} 326 \\ 573 \\ \hline \end{array}$
 $\begin{array}{r} 703 \\ 310 \\ \hline \end{array}$

THE HARDER ADDITION FACTS

Here are the 36 harder addition facts which you learned before. Study them until you can give the answer to each one quickly. They are easy to remember if you study them by blocks.

$\begin{array}{r} 6 \\ 6 \\ \hline 12 \end{array}$	$\begin{array}{r} 8 \quad 3 \\ 3 \quad 8 \\ \hline 11 \quad 11 \end{array}$	$\begin{array}{r} 9 \quad 2 \\ 2 \quad 9 \\ \hline 11 \quad 11 \end{array}$	$\begin{array}{r} 8 \quad 4 \\ 4 \quad 8 \\ \hline 12 \quad 12 \end{array}$	$\begin{array}{r} 6 \quad 5 \\ 5 \quad 6 \\ \hline 11 \quad 11 \end{array}$
$\begin{array}{r} 7 \quad 4 \\ 4 \quad 7 \\ \hline 11 \quad 11 \end{array}$	$\begin{array}{r} 9 \quad 3 \\ 3 \quad 9 \\ \hline 12 \quad 12 \end{array}$	$\begin{array}{r} 7 \\ 7 \\ \hline 14 \end{array}$	$\begin{array}{r} 8 \\ 8 \\ \hline 16 \end{array}$	$\begin{array}{r} 7 \quad 5 \\ 5 \quad 7 \\ \hline 12 \quad 12 \end{array}$
$\begin{array}{r} 9 \quad 4 \\ 4 \quad 9 \\ \hline 13 \quad 13 \end{array}$	$\begin{array}{r} 8 \quad 5 \\ 5 \quad 8 \\ \hline 13 \quad 13 \end{array}$	$\begin{array}{r} 9 \\ 9 \\ \hline 18 \end{array}$	$\begin{array}{r} 8 \quad 6 \\ 6 \quad 8 \\ \hline 14 \quad 14 \end{array}$	$\begin{array}{r} 9 \quad 5 \\ 5 \quad 9 \\ \hline 14 \quad 14 \end{array}$
$\begin{array}{r} 7 \quad 6 \\ 6 \quad 7 \\ \hline 13 \quad 13 \end{array}$	$\begin{array}{r} 8 \quad 7 \\ 7 \quad 8 \\ \hline 15 \quad 15 \end{array}$	$\begin{array}{r} 9 \quad 6 \\ 6 \quad 9 \\ \hline 15 \quad 15 \end{array}$	$\begin{array}{r} 9 \quad 7 \\ 7 \quad 9 \\ \hline 16 \quad 16 \end{array}$	$\begin{array}{r} 9 \quad 8 \\ 8 \quad 9 \\ \hline 17 \quad 17 \end{array}$

Add down and check each exercise by adding up.

- $\begin{array}{r} 84 \\ 41 \\ \hline \end{array}$
 $\begin{array}{r} 43 \\ 71 \\ \hline \end{array}$
 $\begin{array}{r} 91 \\ 41 \\ \hline \end{array}$
 $\begin{array}{r} 75 \\ 83 \\ \hline \end{array}$
 $\begin{array}{r} 90 \\ 65 \\ \hline \end{array}$
 $\begin{array}{r} 70 \\ 50 \\ \hline \end{array}$
 $\begin{array}{r} 23 \\ 90 \\ \hline \end{array}$
 $\begin{array}{r} 50 \\ 82 \\ \hline \end{array}$
- $\begin{array}{r} 836 \\ 352 \\ \hline \end{array}$
 $\begin{array}{r} 645 \\ 840 \\ \hline \end{array}$
 $\begin{array}{r} 905 \\ 374 \\ \hline \end{array}$
 $\begin{array}{r} 504 \\ 690 \\ \hline \end{array}$
 $\begin{array}{r} 902 \\ 705 \\ \hline \end{array}$
 $\begin{array}{r} 787 \\ 702 \\ \hline \end{array}$
- $\begin{array}{r} 933 \\ 243 \\ \hline \end{array}$
 $\begin{array}{r} 402 \\ 847 \\ \hline \end{array}$
 $\begin{array}{r} 620 \\ 906 \\ \hline \end{array}$
 $\begin{array}{r} 832 \\ 764 \\ \hline \end{array}$
 $\begin{array}{r} 706 \\ 413 \\ \hline \end{array}$
 $\begin{array}{r} 941 \\ 530 \\ \hline \end{array}$
- $\begin{array}{r} 440 \\ 925 \\ \hline \end{array}$
 $\begin{array}{r} 745 \\ 602 \\ \hline \end{array}$
 $\begin{array}{r} 813 \\ 982 \\ \hline \end{array}$
 $\begin{array}{r} 709 \\ 900 \\ \hline \end{array}$
 $\begin{array}{r} 870 \\ 513 \\ \hline \end{array}$
 $\begin{array}{r} 962 \\ 803 \\ \hline \end{array}$
- $\begin{array}{r} 555 \\ 940 \\ \hline \end{array}$
 $\begin{array}{r} 610 \\ 768 \\ \hline \end{array}$
 $\begin{array}{r} 976 \\ 802 \\ \hline \end{array}$
 $\begin{array}{r} 824 \\ 765 \\ \hline \end{array}$
 $\begin{array}{r} 930 \\ 752 \\ \hline \end{array}$
 $\begin{array}{r} 629 \\ 970 \\ \hline \end{array}$

PRACTICE IN ADDITION

Add down.

Check by adding up.

1.	<u>53</u> <u>34</u>	<u>62</u> <u>40</u>	<u>53</u> <u>56</u>	<u>70</u> <u>25</u>	<u>28</u> <u>60</u>	<u>84</u> <u>25</u>
2.	<u>72</u> <u>65</u>	<u>95</u> <u>74</u>	<u>50</u> <u>83</u>	<u>44</u> <u>74</u>	<u>92</u> <u>87</u>	<u>46</u> <u>90</u>
3.	<u>460</u> <u>221</u>	<u>841</u> <u>135</u>	<u>302</u> <u>554</u>	<u>150</u> <u>820</u>	<u>243</u> <u>353</u>	<u>603</u> <u>302</u>
4.	<u>436</u> <u>812</u>	<u>670</u> <u>923</u>	<u>775</u> <u>814</u>	<u>321</u> <u>920</u>	<u>962</u> <u>533</u>	<u>623</u> <u>653</u>
5.	<u>654</u> <u>742</u>	<u>102</u> <u>916</u>	<u>772</u> <u>524</u>	<u>550</u> <u>620</u>	<u>324</u> <u>825</u>	<u>840</u> <u>933</u>
6.	<u>960</u> <u>726</u>	<u>803</u> <u>654</u>	<u>534</u> <u>901</u>	<u>252</u> <u>847</u>	<u>965</u> <u>210</u>	<u>732</u> <u>656</u>
7.	<u>498</u> <u>601</u>	<u>725</u> <u>764</u>	<u>902</u> <u>692</u>	<u>376</u> <u>812</u>	<u>903</u> <u>905</u>	<u>643</u> <u>840</u>
8.	<u>941</u> <u>420</u>	<u>830</u> <u>340</u>	<u>505</u> <u>773</u>	<u>850</u> <u>838</u>	<u>732</u> <u>915</u>	<u>642</u> <u>402</u>
9.	<u>857</u> <u>921</u>	<u>376</u> <u>903</u>	<u>624</u> <u>533</u>	<u>703</u> <u>392</u>	<u>840</u> <u>432</u>	<u>532</u> <u>957</u>
10.	<u>354</u> <u>705</u>	<u>847</u> <u>530</u>	<u>730</u> <u>464</u>	<u>945</u> <u>312</u>	<u>802</u> <u>764</u>	<u>922</u> <u>116</u>
11.	<u>824</u> <u>672</u>	<u>356</u> <u>913</u>	<u>525</u> <u>603</u>	<u>454</u> <u>820</u>	<u>634</u> <u>934</u>	<u>467</u> <u>912</u>
12.	<u>945</u> <u>904</u>	<u>480</u> <u>715</u>	<u>237</u> <u>922</u>	<u>762</u> <u>503</u>	<u>523</u> <u>845</u>	<u>634</u> <u>704</u>

EASY ADDITION BY ENDINGS

It is easy to add a one-figure number to a two-figure number.

Look at the examples on the left. They all belong to the "6 and 2 are 8" family because each has the same ending as 6.

<u>6</u>	<u>16</u>	<u>26</u>	<u>36</u>	<u>76</u>
<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
<u>8</u>	<u>18</u>	<u>28</u>	<u>38</u>	<u>78</u>

2
8

When the sum of the ending is not greater than 9, the tens' figure in the sum is the same as the tens' figure in the two-figure number.

Give the sums quickly:

1.	<u>32</u> <u>2</u>	<u>13</u> <u>4</u>	<u>26</u> <u>3</u>	<u>12</u> <u>6</u>	<u>35</u> <u>4</u>	<u>23</u> <u>5</u>	<u>14</u> <u>4</u>
2.	<u>21</u> <u>4</u>	<u>45</u> <u>2</u>	<u>53</u> <u>3</u>	<u>14</u> <u>5</u>	<u>63</u> <u>6</u>	<u>92</u> <u>4</u>	<u>71</u> <u>8</u>
3.	<u>12</u> <u>7</u>	<u>54</u> <u>2</u>	<u>85</u> <u>3</u>	<u>56</u> <u>2</u>	<u>24</u> <u>3</u>	<u>37</u> <u>2</u>	<u>73</u> <u>5</u>
4.	<u>34</u> <u>5</u>	<u>43</u> <u>6</u>	<u>52</u> <u>7</u>	<u>72</u> <u>3</u>	<u>32</u> <u>6</u>	<u>44</u> <u>3</u>	<u>12</u> <u>5</u>
5.	<u>42</u> <u>6</u>	<u>53</u> <u>5</u>	<u>11</u> <u>7</u>	<u>64</u> <u>4</u>	<u>82</u> <u>7</u>	<u>32</u> <u>4</u>	<u>23</u> <u>6</u>
6.	<u>12</u> <u>3</u>	<u>72</u> <u>6</u>	<u>94</u> <u>5</u>	<u>23</u> <u>4</u>	<u>61</u> <u>8</u>	<u>43</u> <u>3</u>	<u>52</u> <u>5</u>
7.	<u>62</u> <u>7</u>	<u>73</u> <u>4</u>	<u>22</u> <u>3</u>	<u>86</u> <u>3</u>	<u>45</u> <u>4</u>	<u>92</u> <u>6</u>	<u>55</u> <u>4</u>

8. Ella paid 22¢ for tooth paste and 5¢ for an ice-cream cone. How much did she spend?

HARDER ADDITION BY ENDINGS

The examples on the right belong to the "7 and 8 are 15" family because each has the same ending as 7 which is 7, 8, and 5.

$$\begin{array}{r} 8 \\ \underline{8} \\ 15 \end{array}$$

7	17	27	37	67
8	8	8	8	8
15	25	35	45	75

When the sum of the ending is more than 9, the tens' figure in the sum is *one more* than the tens' figure in the two-figure number.

Give the sums quickly:

- $\begin{array}{r} 18 \\ 4 \\ \hline \end{array}$
 $\begin{array}{r} 35 \\ 6 \\ \hline \end{array}$
 $\begin{array}{r} 27 \\ 7 \\ \hline \end{array}$
 $\begin{array}{r} 43 \\ 9 \\ \hline \end{array}$
 $\begin{array}{r} 26 \\ 4 \\ \hline \end{array}$
 $\begin{array}{r} 38 \\ 8 \\ \hline \end{array}$
 $\begin{array}{r} 15 \\ 7 \\ \hline \end{array}$
- $\begin{array}{r} 34 \\ 7 \\ \hline \end{array}$
 $\begin{array}{r} 59 \\ 4 \\ \hline \end{array}$
 $\begin{array}{r} 46 \\ 6 \\ \hline \end{array}$
 $\begin{array}{r} 38 \\ 5 \\ \hline \end{array}$
 $\begin{array}{r} 74 \\ 9 \\ \hline \end{array}$
 $\begin{array}{r} 29 \\ 6 \\ \hline \end{array}$
 $\begin{array}{r} 63 \\ 8 \\ \hline \end{array}$
- $\begin{array}{r} 12 \\ 9 \\ \hline \end{array}$
 $\begin{array}{r} 47 \\ 3 \\ \hline \end{array}$
 $\begin{array}{r} 28 \\ 9 \\ \hline \end{array}$
 $\begin{array}{r} 49 \\ 7 \\ \hline \end{array}$
 $\begin{array}{r} 36 \\ 8 \\ \hline \end{array}$
 $\begin{array}{r} 55 \\ 7 \\ \hline \end{array}$
 $\begin{array}{r} 81 \\ 9 \\ \hline \end{array}$
- $\begin{array}{r} 37 \\ 6 \\ \hline \end{array}$
 $\begin{array}{r} 59 \\ 3 \\ \hline \end{array}$
 $\begin{array}{r} 77 \\ 8 \\ \hline \end{array}$
 $\begin{array}{r} 65 \\ 5 \\ \hline \end{array}$
 $\begin{array}{r} 87 \\ 4 \\ \hline \end{array}$
 $\begin{array}{r} 49 \\ 8 \\ \hline \end{array}$
 $\begin{array}{r} 38 \\ 7 \\ \hline \end{array}$
- $\begin{array}{r} 24 \\ 8 \\ \hline \end{array}$
 $\begin{array}{r} 48 \\ 6 \\ \hline \end{array}$
 $\begin{array}{r} 33 \\ 9 \\ \hline \end{array}$
 $\begin{array}{r} 67 \\ 5 \\ \hline \end{array}$
 $\begin{array}{r} 19 \\ 9 \\ \hline \end{array}$
 $\begin{array}{r} 72 \\ 8 \\ \hline \end{array}$
 $\begin{array}{r} 55 \\ 5 \\ \hline \end{array}$
- $\begin{array}{r} 16 \\ 7 \\ \hline \end{array}$
 $\begin{array}{r} 56 \\ 5 \\ \hline \end{array}$
 $\begin{array}{r} 85 \\ 8 \\ \hline \end{array}$
 $\begin{array}{r} 34 \\ 9 \\ \hline \end{array}$
 $\begin{array}{r} 68 \\ 3 \\ \hline \end{array}$
 $\begin{array}{r} 47 \\ 8 \\ \hline \end{array}$
 $\begin{array}{r} 82 \\ 9 \\ \hline \end{array}$
- $\begin{array}{r} 36 \\ 6 \\ \hline \end{array}$
 $\begin{array}{r} 18 \\ 8 \\ \hline \end{array}$
 $\begin{array}{r} 74 \\ 9 \\ \hline \end{array}$
 $\begin{array}{r} 47 \\ 8 \\ \hline \end{array}$
 $\begin{array}{r} 86 \\ 9 \\ \hline \end{array}$
 $\begin{array}{r} 56 \\ 7 \\ \hline \end{array}$
 $\begin{array}{r} 65 \\ 9 \\ \hline \end{array}$

8. Joe paid 75¢ for a neck-tie and 8¢ for a scribbler. How much did they cost him?

COLUMN ADDITION

In a dart game Ellen had 5 tries. Her scores were 4, 3, 7, 5, and 6. What was her total score?

$$\begin{array}{r} 4 \\ 3 \\ 7 \\ 5 \\ 6 \\ \hline 25 \end{array}$$

To find out Ellen's total score we *add*.
Write the numbers in a straight column.

Add down.

Think "7, 14, 19, 25"

Check by adding up.

So Ellen's total score was 25.

Add down. Check each exercise.

- $\begin{array}{r} 3 \\ 2 \\ 7 \\ 4 \\ \hline \end{array}$
 $\begin{array}{r} 5 \\ 3 \\ 6 \\ 5 \\ \hline \end{array}$
 $\begin{array}{r} 8 \\ 4 \\ 7 \\ 7 \\ \hline \end{array}$
 $\begin{array}{r} 2 \\ 6 \\ 7 \\ 3 \\ \hline \end{array}$
 $\begin{array}{r} 6 \\ 7 \\ 5 \\ 9 \\ \hline \end{array}$
 $\begin{array}{r} 9 \\ 6 \\ 7 \\ 4 \\ \hline \end{array}$
 $\begin{array}{r} 4 \\ 3 \\ 9 \\ 2 \\ \hline \end{array}$
 $\begin{array}{r} 9 \\ 3 \\ 6 \\ 3 \\ \hline \end{array}$
 $\begin{array}{r} 4 \\ 8 \\ 8 \\ 5 \\ \hline \end{array}$
- $\begin{array}{r} 6 \\ 5 \\ 8 \\ 3 \\ \hline \end{array}$
 $\begin{array}{r} 8 \\ 2 \\ 5 \\ 4 \\ \hline \end{array}$
 $\begin{array}{r} 5 \\ 7 \\ 4 \\ 8 \\ \hline \end{array}$
 $\begin{array}{r} 7 \\ 6 \\ 5 \\ 6 \\ \hline \end{array}$
 $\begin{array}{r} 3 \\ 8 \\ 8 \\ 5 \\ \hline \end{array}$
 $\begin{array}{r} 9 \\ 2 \\ 4 \\ 9 \\ \hline \end{array}$
 $\begin{array}{r} 7 \\ 5 \\ 3 \\ 7 \\ \hline \end{array}$
 $\begin{array}{r} 4 \\ 9 \\ 6 \\ 9 \\ \hline \end{array}$
 $\begin{array}{r} 5 \\ 6 \\ 7 \\ 5 \\ \hline \end{array}$
- $\begin{array}{r} 7 \\ 7 \\ 4 \\ 5 \\ 8 \\ 3 \\ \hline \end{array}$
 $\begin{array}{r} 3 \\ 7 \\ 6 \\ 3 \\ 7 \\ 5 \\ \hline \end{array}$
 $\begin{array}{r} 9 \\ 5 \\ 7 \\ 8 \\ 6 \\ 5 \\ \hline \end{array}$
 $\begin{array}{r} 8 \\ 8 \\ 6 \\ 9 \\ 5 \\ 6 \\ \hline \end{array}$
 $\begin{array}{r} 6 \\ 5 \\ 8 \\ 9 \\ 7 \\ 4 \\ \hline \end{array}$
 $\begin{array}{r} 7 \\ 6 \\ 9 \\ 7 \\ 9 \\ 5 \\ \hline \end{array}$
 $\begin{array}{r} 6 \\ 9 \\ 5 \\ 8 \\ 7 \\ 6 \\ \hline \end{array}$
 $\begin{array}{r} 9 \\ 7 \\ 4 \\ 3 \\ 9 \\ 6 \\ \hline \end{array}$
 $\begin{array}{r} 6 \\ 6 \\ 8 \\ 3 \\ 5 \\ 6 \\ \hline \end{array}$
- $\begin{array}{r} 15 \\ 6 \\ 7 \\ 8 \\ 5 \\ 3 \\ \hline \end{array}$
 $\begin{array}{r} 19 \\ 8 \\ 5 \\ 8 \\ 4 \\ 6 \\ \hline \end{array}$
 $\begin{array}{r} 27 \\ 4 \\ 8 \\ 5 \\ 8 \\ 7 \\ \hline \end{array}$
 $\begin{array}{r} 42 \\ 5 \\ 6 \\ 4 \\ 8 \\ 5 \\ \hline \end{array}$
 $\begin{array}{r} 24 \\ 9 \\ 4 \\ 5 \\ 8 \\ 4 \\ \hline \end{array}$
 $\begin{array}{r} 46 \\ 3 \\ 7 \\ 5 \\ 7 \\ 4 \\ \hline \end{array}$
 $\begin{array}{r} 38 \\ 4 \\ 6 \\ 5 \\ 8 \\ 4 \\ \hline \end{array}$
 $\begin{array}{r} 49 \\ 4 \\ 5 \\ 7 \\ 6 \\ 3 \\ \hline \end{array}$
 $\begin{array}{r} 35 \\ 3 \\ 7 \\ 6 \\ 4 \\ 7 \\ \hline \end{array}$

MORE PRACTICE IN COLUMN ADDITION

Add. Check each exercise.

1.	2	3	7	4	8	6	4	9	9
	5	6	5	9	7	6	7	5	4
	3	2	7	6	6	5	8	8	7
	4	8	6	5	3	9	4	6	9
2.	5	7	8	6	3	2	5	8	9
	7	9	6	5	9	8	9	3	8
	4	3	7	4	6	6	4	6	5
	6	9	9	8	9	8	7	8	8
3.	7	3	7	6	7	4	6	8	3
	7	8	6	9	8	5	8	8	7
	3	5	4	3	4	7	2	5	8
	4	4	8	8	7	7	9	8	6
	6	7	6	7	5	3	7	6	2
4.	5	4	9	6	8	2	5	9	9
	6	8	3	7	9	9	8	9	6
	9	3	9	5	6	9	3	3	2
	4	5	5	4	5	5	7	8	7
	5	2	3	9	7	4	6	5	4
	3	7	8	3	6	9	7	6	5
5.	13	17	26	32	29	45	36	18	44
	5	4	2	4	4	3	4	5	7
	3	7	4	6	5	6	6	4	5
	4	3	5	5	2	5	4	8	3
	2	5	3	4	7	3	8	4	6
	6	3	5	3	6	7	5	9	7
6.	35	28	19	47	33	52	48	57	61
	3	6	7	8	5	4	8	5	9
	4	5	4	4	7	5	2	6	5
	6	7	5	7	5	4	6	4	3
	5	2	7	3	6	5	4	5	4
	6	7	4	6	6	8	3	3	8

ADDING TWO AND THREE-FIGURE NUMBERS

Yesterday, Mr. Young, the mailman, delivered 312 letters, 43 newspapers, 104 postcards, and 20 magazines. How many pieces of mail did he deliver?

To find out how many pieces of mail he delivered we *add*. Write the numbers in a column with the ones under the ones, the tens under the tens, and the hundreds under the hundreds.

Add down.

Add the ones' column. Think, "5, 9, skip the zero."

Write the 9 in the ones' column.

Add the tens' column. Think, "5, skip the zero, 7."

Write the 7 in the tens' column.

Add the hundreds' column. Think, "4." (Skip the blank spaces).

Write the 4 in the hundreds' column.

Check by adding up. So Mr. Young delivered 479 pieces of mail.

When adding columns, skip the zeros and skip the blank spaces.

312
43
104
20
479

Add down. Check by adding up.

1.	72	84	23	91	74	52	40
	53	81	94	41	90	82	76
	40	53	40	75	65	90	50
	24	40	71	22	80	54	72
2.	74	90	12	63	53	42	93
	72	34	90	91	62	92	64
	80	74	36	50	63	50	80
	61	60	81	63	90	73	90
	90	41	10	92	70	61	82
3.	802	721	732	901	413	11	20
	615	812	603	24	801	910	523
	650	903	300	40	34	60	904
	301	730	851	703	50	906	910
	510	203	910	420	901	11	42



PITCHING HORSE SHOES

Frank and Tiny like to play pitching horse shoes. Each boy pitches two horse shoes each turn and counts one point for each shoe nearest the stake. A "leaner" counts 3 points, and a "ringer" counts 5 points. The boy who get 21 points first wins the game.

1. Frank had 9 points in the game and he made a ringer which gave him 5 points more. How many points did he have then?

2. When Tiny had 12 points he made a leaner which gave him 3 points, and a ringer which gave him 5 points more. How many points did he have then?

3. In three games Frank made scores of 21, 16 and 12. How many points did he make in the three games?

4. In the same three games Tiny made 15, 21, and 21. How many points did he make in the three games?

5. In the school that Frank and Tiny attend there are 70 pupils in Grade I, 61 in Grade II, 54 in Grade III, and 43 in Grade IV. How many pupils are there altogether in the four grades?

6. "Will you pitch horse shoes to-morrow?" Frank asked Tiny. "No," said Tiny, "to-morrow is Saturday and I am going to visit my uncle. I have to go 16 miles on the train and 9 miles more on the bus." How many miles must Tiny go to visit his uncle?

CARRYING IN ADDITION

In the Empire Day parade Tom counted 137 cadets, 124 boy scouts, 78 girl guides and 347 veterans. How many people were in the parade?

To find how many people he counted in the parade we *add*. Write the numbers in a column and add down.

Add the ones' column. Think, "11, 19, 26." 26 ones are the same as 2 tens and 6 ones. Write the 6 under the 7 in the ones' column and carry the 2 tens and add them to the tens' column.

Add the tens column. Think, "5, 7, 14, 18."

18 tens are the same as 1 hundred and 8 tens. Write the 8 under the 4 in the tens' column and carry the 1 hundred and add it to the hundreds' column.

Add the hundreds' column. Think, "2, 3, 6." The 6 means 6 hundreds. Write the 6 under the 3 in the hundreds' column.

Check the addition by adding up.

So Tom counted 686 people in the Empire Day parade.

137
124
78
347
686

Add down. Check by adding up.

1.	32	75	38	53	37	86	69
	56	38	58	64	78	49	49
	60	63	76	55	26	78	77
	27	18	48	74	90	29	46

2.	414	974	805	591	928	40
	704	172	22	683	14	492
	240	640	611	40	207	863
	513	851	40	53	304	580
	205	740	304	661	42	54

3.	251	643	54	382	85	99
	337	371	796	66	809	539
	780	182	563	470	868	85
	207	560	58	62	367	467
	493	398	374	741	35	282

KEEPING THE TOOLS SHARP

Add down.

Check by adding up.

1.	3	8	5	4	9	7	6	3
	4	5	9	6	8	4	8	9
	8	2	3	8	3	6	7	6
	4	6	4	9	7	5	8	8
	<u>5</u>	<u>9</u>	<u>7</u>	<u>5</u>	<u>7</u>	<u>8</u>	<u>5</u>	<u>9</u>
2.	54	73	93	40	51	82		
	62	65	70	85	80	91		
	43	40	34	70	92	63		
	<u>30</u>	<u>41</u>	<u>82</u>	<u>63</u>	<u>96</u>	<u>82</u>		
3.	225	452	313	973	306	286		
	656	424	64	609	793	807		
	407	606	243	552	90	618		
	24	344	31	823	550	44		
	<u>937</u>	<u>905</u>	<u>520</u>	<u>456</u>	<u>64</u>	<u>804</u>		
4.	68	902	720	829	861	18		
	656	424	64	609	793	807		
	407	606	243	552	90	618		
	24	344	31	823	550	44		
	<u>937</u>	<u>905</u>	<u>520</u>	<u>456</u>	<u>64</u>	<u>804</u>		
5.	741	484	247	540	508	375		
	670	76	719	792	67	459		
	895	693	601	231	34	244		
	350	42	720	343	148	787		
	<u>982</u>	<u>533</u>	<u>502</u>	<u>922</u>	<u>366</u>	<u>152</u>		
6.	762	406	759	518	254	46		
	474	737	138	701	95	306		
	304	306	725	825	373	57		
	245	62	484	29	830	725		
	<u>160</u>	<u>934</u>	<u>703</u>	<u>616</u>	<u>89</u>	<u>458</u>		



CANADIAN MONEY

The coins we use every day to buy the things we need are the *1-cent piece*, the *5-cent piece*, the *10-cent piece*, the *25-cent piece* or *quarter*, and the *50-cent piece* or *half-dollar*. The sign for cent or cents is ¢.

1. How many 5¢ pieces would you get in change for a quarter?

2. How many 10¢ pieces would you get in change for a 50¢ piece?

3. How many quarters are the same as a half-dollar?

Besides the coins we have *paper money* or *bills*. The smallest bill is the *one-dollar bill*. We also have a *two-dollar bill*, a *five-dollar bill*, a *ten-dollar bill*, and bills for larger amounts.

The sign for dollar is \$. One dollar is written \$1.00.

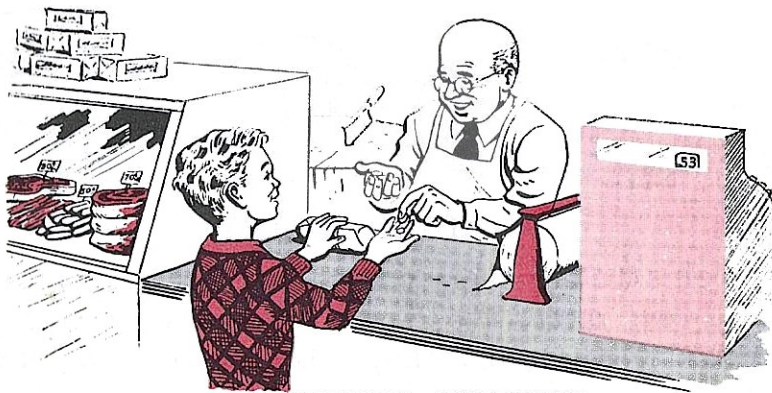
The dot is called a *decimal point*. The decimal point separates the dollars from the cents. In \$1.00 the two zeros show that there are no cents.

In an amount which has both dollars and cents the dollar sign alone is used and the *decimal point is read "and"*. Thus \$4.63 is read "*four dollars and sixty-three cents*".

Very often when the number of cents is less than one dollar the amount is written with a \$ sign and a decimal point. Thus \$.47 is read 47 cents. Of course 47 cents may be written 47¢. \$.05 is read 5 cents.

When amounts of money are written with the dollar sign and the decimal point there must be two figures after the decimal point to show the cents.

4. Read these amounts: \$2.41, \$16.25, \$6.05, \$29.01, \$.59, 87¢, 5¢, \$.08, \$5.00, \$26.00.



COUNTING CHANGE

Fred hurried to the market to buy meat for dinner. He bought a pound of beef steak for 53¢ and gave the clerk a \$1.00 bill. The clerk put the \$1.00 bill in the till. As he gave the change to Fred he said, "The steak was 53¢." Then he counted, "54, 55, 65, 75, one dollar."

1. What did the clerk give Fred when he counted, "54, 55"?
2. What did he give him when he counted, "65, 75"?
3. What did he give when he counted, "one-dollar"?

To count change say how much you spent first and count from there. If there are any cents count them, and count the other coins until you come to the amount you gave to the clerk.

4. Count the change from 25¢ when a person spends:
21¢, 18¢, 7¢, 11¢, 9¢
5. Count the change from 50¢ when a person spends:
43¢, 35¢, 21¢, 16¢, 4¢
6. Count the change from \$1.00 when a person spends:
94¢, 82¢, 55¢, 31¢, 20¢
7. Jimmy bought a bell for his bicycle which cost 65¢. He gave the clerk a \$5 bill. If you were the clerk tell how you would count Jimmy's change.
8. Margie paid \$2.38 for a blouse. She gave the clerk a \$5 bill. If you were the clerk tell how you would count her change.

ADDING DOLLARS AND CENTS

When Alice started to school this year her mother bought her some new clothes. She paid \$6.75 for a dress, \$.69 for stockings, \$12.90 for a coat, and \$3.85 for a pair of shoes. How much did these cost?

\$ 6.75
 .69
12.90
 3.85
\$24.19

To find out how much Alice's mother paid we add.

Write the amounts in a column as shown. Put a \$ before the first amount. Put the decimal points directly under each other.

We add dollars and cents in the same way other numbers are added.

Put the decimal point in the answer directly under the other decimal points and put a \$ before the answer.

Check the addition.

So Alice's mother paid \$24.19 for the clothing.

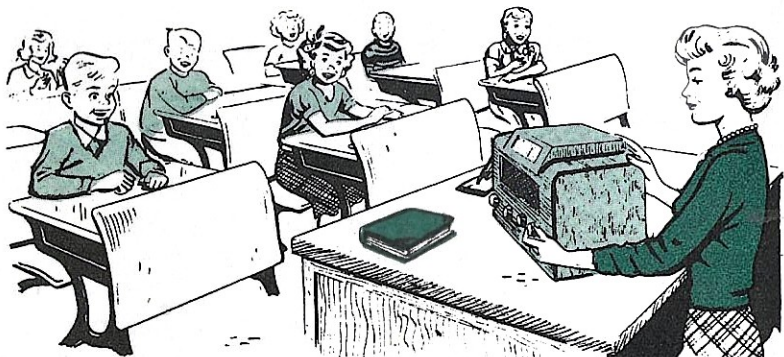
Add.

Check each exercise.

1. \$7.53	\$3.45	\$8.30	\$.84	\$.58	\$.07
6.74	8.96	.78	6.57	.94	.26
3.60	3.74	2.48	7.66	.23	.13
4.48	5.96	5.46	.20	.69	.58
2. \$5.35	\$.66	\$5.93	\$12.44	\$.54	\$48.59
.53	4.56	2.78	4.84	23.38	.24
4.79	2.02	.50	73.56	76.27	5.60
2.10	.48	.41	1.70	.85	68.42
.42	8.13	3.68	47.62	8.36	.84

Write these in columns and add. Check each exercise.

1. \$6.37 + \$3.92 + \$6.19 + \$3.00
2. \$7.26 + \$8.35 + \$5.50 + \$2.09
3. \$.84 + \$.02 + \$.74 + \$.37
4. \$4.93 + \$.19 + \$6.60 + \$9.85 + \$.73
5. \$45.25 + \$.61 + \$9.87 + \$75 + \$87.40
6. \$91.39 + \$38.45 + \$.60 + \$.57 + \$94.04



THE PUPILS BUY A RADIO

The boys and girls of Centreville School decided to raise money to buy a radio for the school.

1. In Centreville School there were 34 pupils in Grade III, 37 in Grade IV, 39 in Grade V, 36 in Grade VI, and 28 in Grade VII. How many pupils helped buy the radio?

2. One week all the pupils agreed to give whatever they could, but no pupil was to give more than 10 cents. Grade III gave \$.94, Grade IV, \$1.27; Grade V, \$2.13; Grade VI, \$.86; and Grade VII, \$2.68. How much money was raised in this way?

3. The girls of the school gave a concert. 67 girls, 79 boys, and 56 adults came. How many were there?

4. The Grade IV boys made \$12.04 by selling their old toys; the Grade IV girls made \$16.29 on a cookie sale; and the teachers in the school gave \$6.00. How much was raised in this way?

5. Everyone agreed that whatever money was made by selling tickets for the Christmas play would be used to buy the radio. From this sale, Grade III turned in \$4.75; Grade IV, \$5.50; Grade V, \$8.25; Grade VI, \$8.75; and Grade VII, \$10.50. How much money was made?

6. Altogether the pupils and teachers raised \$79.96. Then the Home and School Association gave the \$15.04 more needed to buy the radio. How much did it cost?

DIAGNOSTIC TEST IN ADDITION

The work below will test you on all the kinds of addition exercises you should know. If you make mistakes in any kind go back and do again all the exercises on the page whose number is shown on the right.

USING EASY ADDITION FACTS						
1.	<u>52</u>	<u>43</u>	<u>76</u>	<u>240</u>	<u>634</u>	<u>252</u>
	<u>46</u>	<u>35</u>	<u>20</u>	<u>521</u>	<u>305</u>	<u>733</u>

USING HARDER ADDITION FACTS						
2.	<u>83</u>	<u>90</u>	<u>46</u>	<u>644</u>	<u>703</u>	<u>953</u>
	<u>74</u>	<u>57</u>	<u>82</u>	<u>940</u>	<u>626</u>	<u>822</u>

ADDITION BY ENDINGS						
3.	<u>24</u>	<u>43</u>	<u>52</u>	<u>16</u>	<u>27</u>	<u>65</u>
	<u>5</u>	<u>6</u>	<u>5</u>	<u>8</u>	<u>9</u>	<u>8</u>

COLUMN ADDITION—NO CARRYING						
4.	<u>6</u>	<u>9</u>	<u>8</u>	<u>62</u>	<u>71</u>	<u>904</u>
	<u>7</u>	<u>3</u>	<u>9</u>	<u>60</u>	<u>32</u>	<u>620</u>
	<u>4</u>	<u>5</u>	<u>6</u>	<u>41</u>	<u>80</u>	<u>31</u>
	<u>8</u>	<u>7</u>	<u>9</u>	<u>94</u>	<u>60</u>	<u>702</u>
	<u>6</u>	<u>4</u>	<u>8</u>	<u>52</u>	<u>93</u>	<u>30</u>

ADDITION WITH CARRYING						
5.	<u>44</u>	<u>59</u>	<u>506</u>	<u>690</u>	<u>884</u>	<u>95</u>
	<u>55</u>	<u>64</u>	<u>738</u>	<u>291</u>	<u>523</u>	<u>976</u>
	<u>60</u>	<u>46</u>	<u>816</u>	<u>384</u>	<u>694</u>	<u>54</u>
	<u>27</u>	<u>97</u>	<u>524</u>	<u>972</u>	<u>973</u>	<u>768</u>
	<u>84</u>	<u>56</u>	<u>912</u>	<u>470</u>	<u>282</u>	<u>473</u>

ADDING DOLLARS AND CENTS						
6.	<u>\$.77</u>	<u>\$.88</u>	<u>\$2.78</u>	<u>\$9.88</u>	<u>\$.97</u>	
	<u>.57</u>	<u>.05</u>	<u>7.83</u>	<u>.14</u>	<u>2.49</u>	
	<u>.69</u>	<u>.35</u>	<u>8.42</u>	<u>5.09</u>	<u>.70</u>	
	<u>.25</u>	<u>.97</u>	<u>3.63</u>	<u>7.67</u>	<u>.23</u>	
	<u>.42</u>	<u>.52</u>	<u>6.32</u>	<u>.46</u>	<u>9.74</u>	

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MEASURING LENGTH

The *inch*, the *foot*, and the *yard* measure length. Measures of length are used to answer the questions, *how long? how far? how high? how deep? how wide?* etc.

1. At the top of this page you see part of a foot measure divided into inches. Point out 1 inch; 3 inches.

2. Look at your own foot measure. How many inches are there in a foot?

3. Your teacher will show you a yard measure (usually called a yard stick). How many feet are there in a yard? How many inches are there in a yard?

Memorize this table.

The short form is the same for one or more of any measure. Ft. is the short form for 1 ft. or 3 ft.

12 inches (in.) = 1 foot (ft.)
3 feet (ft.) = 1 yard (yd.)
36 inches (in.) = 1 yard (yd.)

4. Tell which measure of length you would use to measure: the length of your desk; the length of your pencil; the length of this page; the length of the school building; the height of a door.

5. Usually the length of a thing is not an even number of feet or yards. For instance, is your desk an even number of feet long? How many whole feet is it? How many inches more is it? Give the length of the desk in feet and inches.

6. Measure your seat mate's height.

7. The teacher will draw a line on the board. How long do you *think* the line is. Measure the line to see how well you estimated its length.

Practise estimating distances. Check each estimate you make by measuring.

EASY SUBTRACTION FACTS AND SUBTRACTION WITH ZERO

Here are the 45 easy subtraction facts which you learned before. Study them by blocks. Also shown is subtraction with zero.

$\begin{array}{r} 4 \\ 9 \\ 9 \end{array}$	$\begin{array}{r} 3 \quad 3 \\ -1 \quad -2 \\ \hline 2 \quad 1 \end{array}$	$\begin{array}{r} 2 \\ -1 \\ \hline 1 \end{array}$	$\begin{array}{r} 4 \quad 4 \\ -1 \quad -3 \\ \hline 3 \quad 1 \end{array}$	$\begin{array}{r} 5 \quad 5 \\ -1 \quad -4 \\ \hline 4 \quad 1 \end{array}$	$\begin{array}{r} 5 \quad 5 \\ -2 \quad -3 \\ \hline 3 \quad 2 \end{array}$
--	---	--	---	---	---

$\begin{array}{r} 6 \\ 8 \\ 8 \end{array}$	$\begin{array}{r} 6 \quad 6 \\ -1 \quad -5 \\ \hline 5 \quad 1 \end{array}$	$\begin{array}{r} 10 \\ -5 \\ \hline 5 \end{array}$	$\begin{array}{r} 6 \quad 6 \\ -2 \quad -4 \\ \hline 4 \quad 2 \end{array}$	$\begin{array}{r} 8 \\ -4 \\ \hline 4 \end{array}$	$\begin{array}{r} 7 \quad 7 \\ -1 \quad -6 \\ \hline 6 \quad 1 \end{array}$	$\begin{array}{r} 7 \quad 7 \\ -3 \quad -4 \\ \hline 4 \quad 3 \end{array}$
--	---	---	---	--	---	---

$\begin{array}{r} 7 \quad 7 \\ 9 \quad 5 \\ 6 \quad 2 \end{array}$	$\begin{array}{r} 8 \quad 8 \\ -1 \quad -7 \\ \hline 7 \quad 1 \end{array}$	$\begin{array}{r} 9 \quad 9 \\ -1 \quad -8 \\ \hline 8 \quad 1 \end{array}$	$\begin{array}{r} 8 \quad 8 \\ -2 \quad -6 \\ \hline 6 \quad 2 \end{array}$	$\begin{array}{r} 8 \quad 8 \\ -3 \quad -5 \\ \hline 5 \quad 3 \end{array}$	$\begin{array}{r} 10 \quad 10 \\ -1 \quad -9 \\ \hline 9 \quad 1 \end{array}$
--	---	---	---	---	---

$\begin{array}{r} 9 \quad 9 \\ 8 \quad 7 \\ 7 \quad 2 \end{array}$	$\begin{array}{r} 10 \quad 10 \\ -2 \quad -8 \\ \hline 8 \quad 2 \end{array}$	$\begin{array}{r} 9 \quad 9 \\ -3 \quad -6 \\ \hline 6 \quad 3 \end{array}$	$\begin{array}{r} 9 \quad 9 \\ -4 \quad -5 \\ \hline 5 \quad 4 \end{array}$	$\begin{array}{r} 10 \quad 10 \\ -3 \quad -7 \\ \hline 7 \quad 3 \end{array}$	$\begin{array}{r} 10 \quad 10 \\ -4 \quad -6 \\ \hline 6 \quad 4 \end{array}$
--	---	---	---	---	---

ANY NUMBER TAKE AWAY ZERO LEAVES THE NUMBER

0	1	2	3	4	5	6	7	8	9
$\begin{array}{r} 0 \\ -0 \\ \hline 0 \end{array}$	$\begin{array}{r} 1 \\ -0 \\ \hline 1 \end{array}$	$\begin{array}{r} 2 \\ -0 \\ \hline 2 \end{array}$	$\begin{array}{r} 3 \\ -0 \\ \hline 3 \end{array}$	$\begin{array}{r} 4 \\ -0 \\ \hline 4 \end{array}$	$\begin{array}{r} 5 \\ -0 \\ \hline 5 \end{array}$	$\begin{array}{r} 6 \\ -0 \\ \hline 6 \end{array}$	$\begin{array}{r} 7 \\ -0 \\ \hline 7 \end{array}$	$\begin{array}{r} 8 \\ -0 \\ \hline 8 \end{array}$	$\begin{array}{r} 9 \\ -0 \\ \hline 9 \end{array}$

ANY NUMBER TAKE AWAY ITSELF LEAVES ZERO

1	2	3	4	5	6	7	8	9
$\begin{array}{r} 1 \\ -1 \\ \hline 0 \end{array}$	$\begin{array}{r} 2 \\ -2 \\ \hline 0 \end{array}$	$\begin{array}{r} 3 \\ -3 \\ \hline 0 \end{array}$	$\begin{array}{r} 4 \\ -4 \\ \hline 0 \end{array}$	$\begin{array}{r} 5 \\ -5 \\ \hline 0 \end{array}$	$\begin{array}{r} 6 \\ -6 \\ \hline 0 \end{array}$	$\begin{array}{r} 7 \\ -7 \\ \hline 0 \end{array}$	$\begin{array}{r} 8 \\ -8 \\ \hline 0 \end{array}$	$\begin{array}{r} 9 \\ -9 \\ \hline 0 \end{array}$

When we "take-away" a smaller number from a larger number we **SUBTRACT**. The sign for subtraction is **-** and means *take-away* or *minus* or *less*. The number from which we subtract is the **minuend**. The number we subtract is the **subtrahend**. The answer is the **difference** or **remainder**.

PRACTICE IN SUBTRACTION

Subtract.

1. $\begin{array}{r} 76 \\ 52 \\ \hline \end{array}$ $\begin{array}{r} 97 \\ 73 \\ \hline \end{array}$ $\begin{array}{r} 109 \\ 47 \\ \hline \end{array}$ $\begin{array}{r} 84 \\ 43 \\ \hline \end{array}$ $\begin{array}{r} 109 \\ 75 \\ \hline \end{array}$ $\begin{array}{r} 56 \\ 24 \\ \hline \end{array}$ $\begin{array}{r} 98 \\ 36 \\ \hline \end{array}$ $\begin{array}{r} 105 \\ 23 \\ \hline \end{array}$
2. $\begin{array}{r} 94 \\ 20 \\ \hline \end{array}$ $\begin{array}{r} 86 \\ 56 \\ \hline \end{array}$ $\begin{array}{r} 103 \\ 33 \\ \hline \end{array}$ $\begin{array}{r} 78 \\ 40 \\ \hline \end{array}$ $\begin{array}{r} 69 \\ 39 \\ \hline \end{array}$ $\begin{array}{r} 102 \\ 60 \\ \hline \end{array}$ $\begin{array}{r} 108 \\ 85 \\ \hline \end{array}$ $\begin{array}{r} 97 \\ 60 \\ \hline \end{array}$
3. $\begin{array}{r} 986 \\ 435 \\ \hline \end{array}$ $\begin{array}{r} 894 \\ 284 \\ \hline \end{array}$ $\begin{array}{r} 767 \\ 602 \\ \hline \end{array}$ $\begin{array}{r} 1075 \\ 570 \\ \hline \end{array}$ $\begin{array}{r} 1039 \\ 905 \\ \hline \end{array}$ $\begin{array}{r} 1089 \\ 184 \\ \hline \end{array}$

HOW TO CHECK SUBTRACTION

Subtract

$126 \leftarrow$ minuent
 $54 \leftarrow$ subtrahend
 $72 \leftarrow$ difference

Check

$54 \leftarrow$ subtrahend
 $72 \leftarrow$ difference
 $126 \leftarrow$ minuent

To check subtraction add the *subtrahend* and the *difference*. If the sum is the same as the *minuent* the subtraction is correct.

Subtract and check.

4. $\begin{array}{r} 56 \\ 41 \\ \hline \end{array}$ $\begin{array}{r} 42 \\ 21 \\ \hline \end{array}$ $\begin{array}{r} 83 \\ 72 \\ \hline \end{array}$ $\begin{array}{r} 65 \\ 35 \\ \hline \end{array}$ $\begin{array}{r} 59 \\ 10 \\ \hline \end{array}$ $\begin{array}{r} 71 \\ 41 \\ \hline \end{array}$ $\begin{array}{r} 92 \\ 62 \\ \hline \end{array}$ $\begin{array}{r} 85 \\ 32 \\ \hline \end{array}$
5. $\begin{array}{r} 96 \\ 34 \\ \hline \end{array}$ $\begin{array}{r} 75 \\ 23 \\ \hline \end{array}$ $\begin{array}{r} 98 \\ 84 \\ \hline \end{array}$ $\begin{array}{r} 83 \\ 63 \\ \hline \end{array}$ $\begin{array}{r} 107 \\ 65 \\ \hline \end{array}$ $\begin{array}{r} 80 \\ 20 \\ \hline \end{array}$ $\begin{array}{r} 106 \\ 25 \\ \hline \end{array}$ $\begin{array}{r} 94 \\ 41 \\ \hline \end{array}$
6. $\begin{array}{r} 574 \\ 433 \\ \hline \end{array}$ $\begin{array}{r} 691 \\ 250 \\ \hline \end{array}$ $\begin{array}{r} 1069 \\ 462 \\ \hline \end{array}$ $\begin{array}{r} 837 \\ 517 \\ \hline \end{array}$ $\begin{array}{r} 1074 \\ 710 \\ \hline \end{array}$ $\begin{array}{r} 687 \\ 486 \\ \hline \end{array}$
7. $\begin{array}{r} 1075 \\ 142 \\ \hline \end{array}$ $\begin{array}{r} 1098 \\ 593 \\ \hline \end{array}$ $\begin{array}{r} 1075 \\ 950 \\ \hline \end{array}$ $\begin{array}{r} 1082 \\ 361 \\ \hline \end{array}$ $\begin{array}{r} 1049 \\ 641 \\ \hline \end{array}$ $\begin{array}{r} 1047 \\ 820 \\ \hline \end{array}$

THE HARDER SUBTRACTION FACTS

Here are the 36 harder subtraction facts which you learned before. Study them until you can give the answer to each one quickly. They are easy to remember if you study them by blocks.

$\begin{array}{r} 18 \\ 0 \\ \hline 0 \end{array}$	$\begin{array}{r} 11 \\ -3 \\ \hline 8 \end{array}$ $\begin{array}{r} 11 \\ -8 \\ \hline 3 \end{array}$	$\begin{array}{r} 11 \\ -2 \\ \hline 9 \end{array}$ $\begin{array}{r} 11 \\ -9 \\ \hline 2 \end{array}$	$\begin{array}{r} 12 \\ -4 \\ \hline 8 \end{array}$ $\begin{array}{r} 12 \\ -8 \\ \hline 4 \end{array}$	$\begin{array}{r} 11 \\ -5 \\ \hline 6 \end{array}$ $\begin{array}{r} 11 \\ -6 \\ \hline 5 \end{array}$
$\begin{array}{r} 11 \\ 4 \\ \hline 7 \end{array}$ $\begin{array}{r} 11 \\ 7 \\ \hline 4 \end{array}$	$\begin{array}{r} 12 \\ -3 \\ \hline 9 \end{array}$ $\begin{array}{r} 12 \\ -9 \\ \hline 3 \end{array}$	$\begin{array}{r} 14 \\ -7 \\ \hline 7 \end{array}$	$\begin{array}{r} 16 \\ -8 \\ \hline 8 \end{array}$	$\begin{array}{r} 12 \\ -5 \\ \hline 7 \end{array}$ $\begin{array}{r} 12 \\ -7 \\ \hline 5 \end{array}$
$\begin{array}{r} 10 \\ 4 \\ \hline 6 \end{array}$ $\begin{array}{r} 10 \\ 0 \\ \hline 4 \end{array}$	$\begin{array}{r} 13 \\ -5 \\ \hline 8 \end{array}$ $\begin{array}{r} 13 \\ -8 \\ \hline 5 \end{array}$	$\begin{array}{r} 18 \\ -9 \\ \hline 9 \end{array}$	$\begin{array}{r} 14 \\ -6 \\ \hline 8 \end{array}$ $\begin{array}{r} 14 \\ -8 \\ \hline 6 \end{array}$	$\begin{array}{r} 14 \\ -5 \\ \hline 9 \end{array}$ $\begin{array}{r} 14 \\ -9 \\ \hline 5 \end{array}$
$\begin{array}{r} 10 \\ 0 \\ \hline 7 \end{array}$ $\begin{array}{r} 10 \\ 7 \\ \hline 0 \end{array}$	$\begin{array}{r} 15 \\ -7 \\ \hline 8 \end{array}$ $\begin{array}{r} 15 \\ -8 \\ \hline 7 \end{array}$	$\begin{array}{r} 15 \\ -6 \\ \hline 9 \end{array}$ $\begin{array}{r} 15 \\ -9 \\ \hline 6 \end{array}$	$\begin{array}{r} 16 \\ -7 \\ \hline 9 \end{array}$ $\begin{array}{r} 16 \\ -9 \\ \hline 7 \end{array}$	$\begin{array}{r} 17 \\ -8 \\ \hline 9 \end{array}$ $\begin{array}{r} 17 \\ -9 \\ \hline 8 \end{array}$

subtract and check.

1. $\begin{array}{r} 138 \\ 53 \\ \hline \end{array}$ $\begin{array}{r} 147 \\ 75 \\ \hline \end{array}$ $\begin{array}{r} 159 \\ 66 \\ \hline \end{array}$ $\begin{array}{r} 128 \\ 45 \\ \hline \end{array}$ $\begin{array}{r} 116 \\ 54 \\ \hline \end{array}$ $\begin{array}{r} 169 \\ 87 \\ \hline \end{array}$ $\begin{array}{r} 185 \\ 94 \\ \hline \end{array}$
2. $\begin{array}{r} 140 \\ 60 \\ \hline \end{array}$ $\begin{array}{r} 129 \\ 61 \\ \hline \end{array}$ $\begin{array}{r} 137 \\ 84 \\ \hline \end{array}$ $\begin{array}{r} 172 \\ 82 \\ \hline \end{array}$ $\begin{array}{r} 154 \\ 72 \\ \hline \end{array}$ $\begin{array}{r} 139 \\ 90 \\ \hline \end{array}$ $\begin{array}{r} 116 \\ 76 \\ \hline \end{array}$
3. $\begin{array}{r} 158 \\ 86 \\ \hline \end{array}$ $\begin{array}{r} 179 \\ 92 \\ \hline \end{array}$ $\begin{array}{r} 149 \\ 53 \\ \hline \end{array}$ $\begin{array}{r} 117 \\ 40 \\ \hline \end{array}$ $\begin{array}{r} 165 \\ 92 \\ \hline \end{array}$ $\begin{array}{r} 131 \\ 71 \\ \hline \end{array}$ $\begin{array}{r} 128 \\ 87 \\ \hline \end{array}$
4. $\begin{array}{r} 1690 \\ 780 \\ \hline \end{array}$ $\begin{array}{r} 1478 \\ 934 \\ \hline \end{array}$ $\begin{array}{r} 1147 \\ 302 \\ \hline \end{array}$ $\begin{array}{r} 1585 \\ 923 \\ \hline \end{array}$ $\begin{array}{r} 1235 \\ 730 \\ \hline \end{array}$ $\begin{array}{r} 1461 \\ 820 \\ \hline \end{array}$ $\begin{array}{r} 1336 \\ 423 \\ \hline \end{array}$
5. $\begin{array}{r} 1234 \\ 503 \\ \hline \end{array}$ $\begin{array}{r} 1468 \\ 623 \\ \hline \end{array}$ $\begin{array}{r} 1196 \\ 620 \\ \hline \end{array}$ $\begin{array}{r} 1395 \\ 653 \\ \hline \end{array}$ $\begin{array}{r} 1169 \\ 856 \\ \hline \end{array}$ $\begin{array}{r} 1597 \\ 746 \\ \hline \end{array}$ $\begin{array}{r} 1265 \\ 945 \\ \hline \end{array}$

PROBLEMS USING SUBTRACTION

There are 3 kinds of problems in which we use subtraction. **We subtract to find:**

- I *How many are left, or how much is left, or the rest.*
- II *How many more, how much more; how many less, how much less; how many fewer; how much larger, taller, shorter, lighter, heavier, farther, nearer, etc.*
- III *What is or was the difference.*

In each of these problems tell *why* you subtract.

1. Bill has 17 marbles and Tom has 9. How many more marbles has Bill than Tom?
2. Norma has 13¢. She spent 5¢ for a bottle of pop. How much money did she have left?
3. Jean is 54 inches tall and Mary is 41 inches tall. What is the difference in their heights?
4. Leo is saving his money to buy a baseball bat which costs 85¢. He has 55¢ now. How much more will Leo have to save before he can buy the bat?
5. Mr. Jones has a flock of 474 hens and Mr. Smith has a flock of 230. How many fewer hens has Mr. Smith than Mr. Jones?
6. A barrel of flour weighs 196 pounds and a bag of potatoes weighs 75 pounds. What is the difference between the weights of a barrel of flour and a bag of potatoes?
7. Hilda is reading a book which has 148 pages. If she has read 90 pages, how many pages are left to read?
8. Tony weighs 73 pounds and his father weighs 159 pounds. How many pounds lighter is Tony than his father?

SUBTRACTION WITH BORROWING

The pupils of Brock School sold 423 tickets for the Thanksgiving concert to pupils and adults. 275 tickets were sold to pupils. How many tickets were sold to adults? To find out how many tickets were sold to adults **we subtract.**

$$\begin{array}{r} 423 \\ - 275 \\ \hline 148 \end{array}$$

Check:

$$\begin{array}{r} 275 \\ + 148 \\ \hline 423 \end{array}$$

Write the numbers as shown on the left.

We cannot take 5 ones from 3 ones. **Borrow** 1 ten from the 2 tens and change it to 10 ones. Think of the 3 as 13 and of the 2 as 1.

Think, "13 ones take away 5 ones leaves 8 ones."

Write the 8 in the ones' column.

We cannot take 7 tens from 1 ten. **Borrow** 1 hundred from the 4 hundreds and change it to 10 tens. Think of the 1 as 11 and of the 4 as 3.

Think, "11 tens take away 7 tens leaves 4 tens." Write the 4 in the tens' column.

Think, "3 hundreds take away 2 hundreds leaves 1 hundred." Write the 1 in the hundreds' column.

Check by adding the subtrahend and the remainder to see if we get the minuend. We do.

So 148 tickets were sold to adults.

Subtract.

Check each exercise.

1. $\begin{array}{r} 773 \\ - 625 \\ \hline \end{array}$	$\begin{array}{r} 654 \\ - 418 \\ \hline \end{array}$	$\begin{array}{r} 892 \\ - 557 \\ \hline \end{array}$	$\begin{array}{r} 981 \\ - 643 \\ \hline \end{array}$	$\begin{array}{r} 769 \\ - 573 \\ \hline \end{array}$	$\begin{array}{r} 618 \\ - 456 \\ \hline \end{array}$	$\begin{array}{r} 567 \\ - 192 \\ \hline \end{array}$
2. $\begin{array}{r} 653 \\ - 156 \\ \hline \end{array}$	$\begin{array}{r} 442 \\ - 278 \\ \hline \end{array}$	$\begin{array}{r} 561 \\ - 394 \\ \hline \end{array}$	$\begin{array}{r} 742 \\ - 445 \\ \hline \end{array}$	$\begin{array}{r} 924 \\ - 379 \\ \hline \end{array}$	$\begin{array}{r} 827 \\ - 389 \\ \hline \end{array}$	$\begin{array}{r} 934 \\ - 167 \\ \hline \end{array}$
3. $\begin{array}{r} 1473 \\ - 586 \\ \hline \end{array}$	$\begin{array}{r} 1582 \\ - 789 \\ \hline \end{array}$	$\begin{array}{r} 1625 \\ - 728 \\ \hline \end{array}$	$\begin{array}{r} 1925 \\ - 996 \\ \hline \end{array}$	$\begin{array}{r} 1253 \\ - 468 \\ \hline \end{array}$	$\begin{array}{r} 1323 \\ - 735 \\ \hline \end{array}$	
4. $\begin{array}{r} 249 \\ - 57 \\ \hline \end{array}$	$\begin{array}{r} 337 \\ - 76 \\ \hline \end{array}$	$\begin{array}{r} 419 \\ - 84 \\ \hline \end{array}$	$\begin{array}{r} 534 \\ - 49 \\ \hline \end{array}$	$\begin{array}{r} 341 \\ - 85 \\ \hline \end{array}$	$\begin{array}{r} 225 \\ - 28 \\ \hline \end{array}$	$\begin{array}{r} 683 \\ - 94 \\ \hline \end{array}$
5. $\begin{array}{r} 71 \\ - 66 \\ \hline \end{array}$	$\begin{array}{r} 384 \\ - 318 \\ \hline \end{array}$	$\begin{array}{r} 151 \\ - 147 \\ \hline \end{array}$	$\begin{array}{r} 329 \\ - 282 \\ \hline \end{array}$	$\begin{array}{r} 235 \\ - 166 \\ \hline \end{array}$	$\begin{array}{r} 461 \\ - 399 \\ \hline \end{array}$	$\begin{array}{r} 163 \\ - 159 \\ \hline \end{array}$

PRACTICE IN SUBTRACTION

Subtract

Check each exercise.

1.	$\begin{array}{r} 865 \\ 234 \\ \hline \end{array}$	$\begin{array}{r} 974 \\ 462 \\ \hline \end{array}$	$\begin{array}{r} 789 \\ 352 \\ \hline \end{array}$	$\begin{array}{r} 685 \\ 465 \\ \hline \end{array}$	$\begin{array}{r} 842 \\ 402 \\ \hline \end{array}$	$\begin{array}{r} 853 \\ 803 \\ \hline \end{array}$
2.	$\begin{array}{r} 1278 \\ 543 \\ \hline \end{array}$	$\begin{array}{r} 1456 \\ 624 \\ \hline \end{array}$	$\begin{array}{r} 1028 \\ 305 \\ \hline \end{array}$	$\begin{array}{r} 1569 \\ 867 \\ \hline \end{array}$	$\begin{array}{r} 1817 \\ 915 \\ \hline \end{array}$	$\begin{array}{r} 1168 \\ 573 \\ \hline \end{array}$
3.	$\begin{array}{r} 1696 \\ 792 \\ \hline \end{array}$	$\begin{array}{r} 1249 \\ 832 \\ \hline \end{array}$	$\begin{array}{r} 1715 \\ 904 \\ \hline \end{array}$	$\begin{array}{r} 1138 \\ 726 \\ \hline \end{array}$	$\begin{array}{r} 1435 \\ 802 \\ \hline \end{array}$	$\begin{array}{r} 1397 \\ 947 \\ \hline \end{array}$
4.	$\begin{array}{r} 863 \\ 535 \\ \hline \end{array}$	$\begin{array}{r} 296 \\ 148 \\ \hline \end{array}$	$\begin{array}{r} 752 \\ 327 \\ \hline \end{array}$	$\begin{array}{r} 675 \\ 656 \\ \hline \end{array}$	$\begin{array}{r} 991 \\ 624 \\ \hline \end{array}$	$\begin{array}{r} 544 \\ 529 \\ \hline \end{array}$
5.	$\begin{array}{r} 739 \\ 253 \\ \hline \end{array}$	$\begin{array}{r} 688 \\ 490 \\ \hline \end{array}$	$\begin{array}{r} 578 \\ 286 \\ \hline \end{array}$	$\begin{array}{r} 914 \\ 464 \\ \hline \end{array}$	$\begin{array}{r} 849 \\ 775 \\ \hline \end{array}$	$\begin{array}{r} 427 \\ 394 \\ \hline \end{array}$
6.	$\begin{array}{r} 524 \\ 375 \\ \hline \end{array}$	$\begin{array}{r} 741 \\ 282 \\ \hline \end{array}$	$\begin{array}{r} 622 \\ 287 \\ \hline \end{array}$	$\begin{array}{r} 753 \\ 298 \\ \hline \end{array}$	$\begin{array}{r} 831 \\ 246 \\ \hline \end{array}$	$\begin{array}{r} 462 \\ 383 \\ \hline \end{array}$
7.	$\begin{array}{r} 945 \\ 346 \\ \hline \end{array}$	$\begin{array}{r} 623 \\ 337 \\ \hline \end{array}$	$\begin{array}{r} 856 \\ 459 \\ \hline \end{array}$	$\begin{array}{r} 621 \\ 543 \\ \hline \end{array}$	$\begin{array}{r} 952 \\ 669 \\ \hline \end{array}$	$\begin{array}{r} 734 \\ 457 \\ \hline \end{array}$
8.	$\begin{array}{r} 731 \\ 668 \\ \hline \end{array}$	$\begin{array}{r} 847 \\ 359 \\ \hline \end{array}$	$\begin{array}{r} 971 \\ 875 \\ \hline \end{array}$	$\begin{array}{r} 535 \\ 489 \\ \hline \end{array}$	$\begin{array}{r} 646 \\ 478 \\ \hline \end{array}$	$\begin{array}{r} 573 \\ 296 \\ \hline \end{array}$
9.	$\begin{array}{r} 843 \\ 594 \\ \hline \end{array}$	$\begin{array}{r} 292 \\ 196 \\ \hline \end{array}$	$\begin{array}{r} 761 \\ 379 \\ \hline \end{array}$	$\begin{array}{r} 834 \\ 638 \\ \hline \end{array}$	$\begin{array}{r} 382 \\ 284 \\ \hline \end{array}$	$\begin{array}{r} 765 \\ 597 \\ \hline \end{array}$
10.	$\begin{array}{r} 1462 \\ 885 \\ \hline \end{array}$	$\begin{array}{r} 1326 \\ 678 \\ \hline \end{array}$	$\begin{array}{r} 1251 \\ 862 \\ \hline \end{array}$	$\begin{array}{r} 1323 \\ 445 \\ \hline \end{array}$	$\begin{array}{r} 1597 \\ 998 \\ \hline \end{array}$	$\begin{array}{r} 1136 \\ 376 \\ \hline \end{array}$
11.	$\begin{array}{r} 1246 \\ 649 \\ \hline \end{array}$	$\begin{array}{r} 1423 \\ 967 \\ \hline \end{array}$	$\begin{array}{r} 1632 \\ 998 \\ \hline \end{array}$	$\begin{array}{r} 1254 \\ 357 \\ \hline \end{array}$	$\begin{array}{r} 1761 \\ 789 \\ \hline \end{array}$	$\begin{array}{r} 1484 \\ 695 \\ \hline \end{array}$

WATCH THE ZEROS IN THE MINUEND

The teacher bought a package of paper in which there were 500 sheets. When the pupils had used 384 sheets how many were left?

To find out how many sheets were left we *subtract*.

Write the numbers as shown on the right.

We cannot take 4 ones from 0 ones. We cannot borrow from the tens because there are 0 tens.

Borrow 1 hundred from the 5 hundreds which leaves 4 hundreds. Change the 1 hundred to 10 tens. Now we can borrow 1 ten from the 10 tens which leaves 9 tens, and change it to 10 ones.

Think of the 0 in the ones' place as 10, of the 0 in the tens' place as 9, and of the 5 as 4.

Think, "10 - 4 leaves 6." Write the 6 in the ones' column.

Think, "9 - 8 leaves 1." Write the 1 in the tens' column.

Think, "4 - 3 leaves 1." Write the 1 in the hundreds' column.

Check the work as shown.

So there were 116 sheets of paper left.

$$\begin{array}{r} 500 \\ 384 \\ \hline 116 \end{array}$$

Check:

$$\begin{array}{r} 384 \\ 116 \\ \hline 500 \end{array}$$

Subtract

Check each exercise.

1.	$\begin{array}{r} 70 \\ 28 \\ \hline \end{array}$	$\begin{array}{r} 50 \\ 35 \\ \hline \end{array}$	$\begin{array}{r} 90 \\ 51 \\ \hline \end{array}$	$\begin{array}{r} 80 \\ 27 \\ \hline \end{array}$	$\begin{array}{r} 60 \\ 34 \\ \hline \end{array}$	$\begin{array}{r} 80 \\ 42 \\ \hline \end{array}$	$\begin{array}{r} 70 \\ 58 \\ \hline \end{array}$	$\begin{array}{r} 90 \\ 36 \\ \hline \end{array}$
2.	$\begin{array}{r} 300 \\ 125 \\ \hline \end{array}$	$\begin{array}{r} 600 \\ 263 \\ \hline \end{array}$	$\begin{array}{r} 500 \\ 149 \\ \hline \end{array}$	$\begin{array}{r} 900 \\ 632 \\ \hline \end{array}$	$\begin{array}{r} 400 \\ 276 \\ \hline \end{array}$	$\begin{array}{r} 800 \\ 384 \\ \hline \end{array}$	$\begin{array}{r} 600 \\ 457 \\ \hline \end{array}$	
3.	$\begin{array}{r} 600 \\ 343 \\ \hline \end{array}$	$\begin{array}{r} 508 \\ 282 \\ \hline \end{array}$	$\begin{array}{r} 407 \\ 125 \\ \hline \end{array}$	$\begin{array}{r} 908 \\ 364 \\ \hline \end{array}$	$\begin{array}{r} 609 \\ 116 \\ \hline \end{array}$	$\begin{array}{r} 506 \\ 374 \\ \hline \end{array}$	$\begin{array}{r} 807 \\ 236 \\ \hline \end{array}$	
4.	$\begin{array}{r} 402 \\ 345 \\ \hline \end{array}$	$\begin{array}{r} 704 \\ 326 \\ \hline \end{array}$	$\begin{array}{r} 901 \\ 567 \\ \hline \end{array}$	$\begin{array}{r} 606 \\ 218 \\ \hline \end{array}$	$\begin{array}{r} 805 \\ 389 \\ \hline \end{array}$	$\begin{array}{r} 307 \\ 138 \\ \hline \end{array}$	$\begin{array}{r} 503 \\ 276 \\ \hline \end{array}$	
5.	$\begin{array}{r} 902 \\ 809 \\ \hline \end{array}$	$\begin{array}{r} 200 \\ 125 \\ \hline \end{array}$	$\begin{array}{r} 700 \\ 652 \\ \hline \end{array}$	$\begin{array}{r} 500 \\ 463 \\ \hline \end{array}$	$\begin{array}{r} 300 \\ 43 \\ \hline \end{array}$	$\begin{array}{r} 500 \\ 68 \\ \hline \end{array}$	$\begin{array}{r} 200 \\ 26 \\ \hline \end{array}$	

PRACTICE IN SUBTRACTION

Subtract.

Check each exercise.

1.	$\begin{array}{r} 568 \\ 243 \\ \hline \end{array}$	$\begin{array}{r} 479 \\ 136 \\ \hline \end{array}$	$\begin{array}{r} 985 \\ 450 \\ \hline \end{array}$	$\begin{array}{r} 627 \\ 322 \\ \hline \end{array}$	$\begin{array}{r} 784 \\ 404 \\ \hline \end{array}$	$\begin{array}{r} 392 \\ 350 \\ \hline \end{array}$
2.	$\begin{array}{r} 1386 \\ 742 \\ \hline \end{array}$	$\begin{array}{r} 1159 \\ 353 \\ \hline \end{array}$	$\begin{array}{r} 1586 \\ 720 \\ \hline \end{array}$	$\begin{array}{r} 1237 \\ 405 \\ \hline \end{array}$	$\begin{array}{r} 1658 \\ 848 \\ \hline \end{array}$	$\begin{array}{r} 1795 \\ 823 \\ \hline \end{array}$
3.	$\begin{array}{r} 793 \\ 464 \\ \hline \end{array}$	$\begin{array}{r} 351 \\ 236 \\ \hline \end{array}$	$\begin{array}{r} 474 \\ 256 \\ \hline \end{array}$	$\begin{array}{r} 762 \\ 619 \\ \hline \end{array}$	$\begin{array}{r} 195 \\ 178 \\ \hline \end{array}$	$\begin{array}{r} 686 \\ 677 \\ \hline \end{array}$
4.	$\begin{array}{r} 526 \\ 254 \\ \hline \end{array}$	$\begin{array}{r} 715 \\ 543 \\ \hline \end{array}$	$\begin{array}{r} 947 \\ 250 \\ \hline \end{array}$	$\begin{array}{r} 866 \\ 592 \\ \hline \end{array}$	$\begin{array}{r} 339 \\ 289 \\ \hline \end{array}$	$\begin{array}{r} 578 \\ 493 \\ \hline \end{array}$
5.	$\begin{array}{r} 441 \\ 275 \\ \hline \end{array}$	$\begin{array}{r} 624 \\ 438 \\ \hline \end{array}$	$\begin{array}{r} 823 \\ 669 \\ \hline \end{array}$	$\begin{array}{r} 332 \\ 248 \\ \hline \end{array}$	$\begin{array}{r} 726 \\ 527 \\ \hline \end{array}$	$\begin{array}{r} 945 \\ 568 \\ \hline \end{array}$
6.	$\begin{array}{r} 527 \\ 388 \\ \hline \end{array}$	$\begin{array}{r} 323 \\ 185 \\ \hline \end{array}$	$\begin{array}{r} 646 \\ 248 \\ \hline \end{array}$	$\begin{array}{r} 554 \\ 497 \\ \hline \end{array}$	$\begin{array}{r} 648 \\ 589 \\ \hline \end{array}$	$\begin{array}{r} 852 \\ 253 \\ \hline \end{array}$
7.	$\begin{array}{r} 225 \\ 196 \\ \hline \end{array}$	$\begin{array}{r} 762 \\ 387 \\ \hline \end{array}$	$\begin{array}{r} 931 \\ 464 \\ \hline \end{array}$	$\begin{array}{r} 827 \\ 379 \\ \hline \end{array}$	$\begin{array}{r} 472 \\ 395 \\ \hline \end{array}$	$\begin{array}{r} 964 \\ 796 \\ \hline \end{array}$
8.	$\begin{array}{r} 770 \\ 643 \\ \hline \end{array}$	$\begin{array}{r} 960 \\ 717 \\ \hline \end{array}$	$\begin{array}{r} 890 \\ 564 \\ \hline \end{array}$	$\begin{array}{r} 450 \\ 275 \\ \hline \end{array}$	$\begin{array}{r} 640 \\ 458 \\ \hline \end{array}$	$\begin{array}{r} 530 \\ 461 \\ \hline \end{array}$
9.	$\begin{array}{r} 500 \\ 236 \\ \hline \end{array}$	$\begin{array}{r} 900 \\ 542 \\ \hline \end{array}$	$\begin{array}{r} 600 \\ 389 \\ \hline \end{array}$	$\begin{array}{r} 700 \\ 253 \\ \hline \end{array}$	$\begin{array}{r} 400 \\ 317 \\ \hline \end{array}$	$\begin{array}{r} 800 \\ 775 \\ \hline \end{array}$
10.	$\begin{array}{r} 807 \\ 324 \\ \hline \end{array}$	$\begin{array}{r} 306 \\ 183 \\ \hline \end{array}$	$\begin{array}{r} 509 \\ 146 \\ \hline \end{array}$	$\begin{array}{r} 403 \\ 226 \\ \hline \end{array}$	$\begin{array}{r} 901 \\ 495 \\ \hline \end{array}$	$\begin{array}{r} 704 \\ 688 \\ \hline \end{array}$
11.	$\begin{array}{r} 624 \\ 515 \\ \hline \end{array}$	$\begin{array}{r} 928 \\ 878 \\ \hline \end{array}$	$\begin{array}{r} 524 \\ 329 \\ \hline \end{array}$	$\begin{array}{r} 340 \\ 296 \\ \hline \end{array}$	$\begin{array}{r} 800 \\ 221 \\ \hline \end{array}$	$\begin{array}{r} 206 \\ 158 \\ \hline \end{array}$

HARDER PROBLEMS USING SUBTRACTION

In each of the problems below tell *why* you subtract.

1. Jim's grandfather is 82 years old and Jim's father is 49 years old. What is the difference in their ages?

2. Lily had 90¢ in her piggy bank. Today she spent 48¢ for crayons and a drawing book. How much money has she left in her bank?

3. The distance from Montreal to Ottawa by train is 118 miles. When the train from Montreal to Ottawa has travelled 49 miles how many more miles must it go to reach Ottawa?

4. There are 365 days in a year and 190 of them are school days. How many days during the year are there in which there is no school?

5. At the country fair one of the games was to guess how many beans there were in a jar. Ellen guessed there were 675 beans in the jar. Later Ellen found out that the jar held 842 beans. What was the difference between the number of beans in the jar and Ellen's guess?

6. Torchy is a stamp collector. He has a book which will hold 500 stamps. If he has 345 stamps now how many more stamps must he collect to fill the book?

7. In Uptown school there are 304 pupils of whom 167 are girls. How many boys are there in Uptown school?

8. Neil's father owned a 300 acre farm. He sold 158 acres to a war veteran. How many acres did Neil's father have left?

9. At the Thanksgiving Day football game there were 1342 people but only 695 people could get seats in the grandstand. How many people did not get grandstand seats?

ROMAN NUMERALS

The Romans who lived a long time ago, used letters to stand for numbers. We still use Roman numerals today on old clocks, for chapters in books, for numbering the volumes of a set of books, for grades in school, and for writing the dates on corner stones of public buildings.

The Romans wrote all their numbers by using seven letters, with the values shown here.

I	V	X	L	C	D	M
1	5	10	50	100	500	1000

It is easy to write Roman Numerals if you remember three rules.

1. When a letter is repeated add its value to get the number. II = 2; XXX = 30; CCC = 300.

2. When a letter of smaller value is written after a letter of larger value add the values. XI = X + I = 11; XV = X + V = 15; LX = L + X = 60.

3. When a letter of smaller value is written before a letter of larger value subtract the values. IV = V - I = 4; XC = C - X = 90; CM = M - C = 900.

1. Read these Roman Numerals: VII, XIV, XXIII, XIX, LII, XLIV, LXV, LXXI, CLIII, XCIX, CDX, MDC, CMXI.

2. Write these numbers in Roman Numerals: 16, 35, 64, 552, 627, 904, 1761.

3. Read these sentences:

- Julie is in Grade V and Robert is in Grade IX.
- I just finished reading Chapter XXI.
- Please bring me Volume XVIII of the *Book of the World*.
- The corner stone was laid in MCMXLVIII.
- World War II started in MCMXXXIX.

SUBTRACTING DOLLARS AND CENTS

Jean saves her money by putting it in the bank. When she had \$27.42 in the bank she took out \$14.75 to buy a coat. How much money has Jean left in the bank?

To find out how much Jean has left we *subtract*.

\$27.42
14.75
\$12.67

Write the numbers as shown with the *decimal points directly under each other*. Put a \$ before the *minuend*.

We subtract dollars and cents in the same way other numbers are subtracted.

Put a decimal point in the answer directly under the other decimal points and put a \$ before the answer.

Check:
\$14.75
12.67
\$27.42

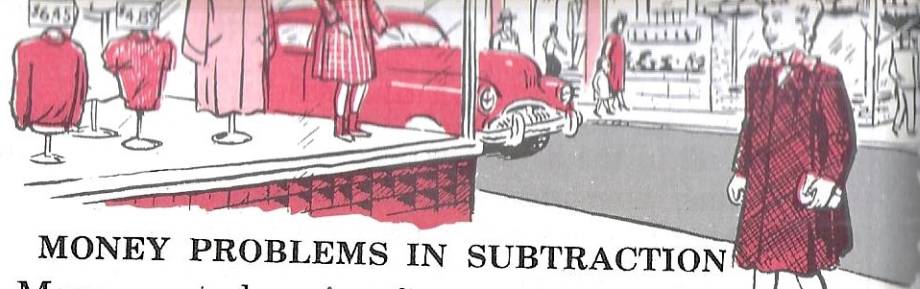
Check the subtraction as shown.

So Jean had \$12.67 left in the bank.

Subtract.

Check each answer.

1.	\$8.75 3.23	\$10.97 4.54	\$13.58 7.05	\$2.69 .67	\$.86 .24
2.	\$.64 .28	\$.91 .45	\$.75 .39	\$.50 .32	\$.70 .26
3.	\$9.84 3.35	\$12.62 4.57	\$19.56 9.29	\$7.37 1.65	\$13.76 5.86
4.	\$8.52 6.77	\$14.35 9.66	\$12.57 4.99	\$17.23 7.34	\$15.61 6.78
5.	\$2.33 .84	\$5.66 .88	\$4.32 3.93	\$2.21 1.29	\$3.73 3.68
6.	\$5.00 1.45	\$14.01 6.26	\$16.01 7.35	\$3.00 2.67	\$4.00 .19



MONEY PROBLEMS IN SUBTRACTION

1. Mona went shopping for a sweater. She saw two which she liked. The price of one was \$6.45 and the price of the other was \$4.89. What was the difference in the prices of the sweaters?

2. Last summer Edgar saved \$14.50 out of the money he earned and deposited it in the bank. Just before school started he drew out \$6.75 to buy a pair of shoes and a cap. How much did he have left in the bank?

3. Roy is saving his money to buy a pair of skates. They will cost \$4.35. If he has already saved \$2.74 how much more must he save before he can buy the skates?

4. Mona saw a coat in a store window which was priced \$15.40. At a sale the next week the price of the same coat was \$12.99. How much less was the sale price than the regular price?

5. Bill wanted to visit his aunt. His father gave him \$5.00. If Bill paid \$1.65 for his railway ticket, how much did he have left?

6. Jean's father earns \$46.25 a week and her big brother earns \$22.60 a week. What is the difference in the wages of Jean's father and her brother?

7. Allan said, "I paid \$18.25 for this suit." Steve said, "My suit cost \$15.75." How much less did Steve's suit cost?

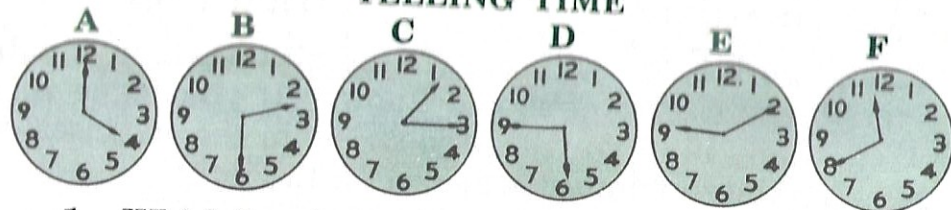
8. Mrs. Brown's electric light bill for October was \$4.82. She paid the bill early and had to pay only \$4.32. How much did she save by paying her bill early?

DIAGNOSTIC TEST IN SUBTRACTION

The work below will test you on all the kinds of subtraction exercises you should know. If you make mistakes in any kind go back and do again the exercises on the page whose number is shown on the right.

USING EASY SUBTRACTION FACTS						Page
1. 47	98	639	978	1084	1026	24
<u>23</u>	<u>35</u>	<u>437</u>	<u>506</u>	<u>334</u>	<u>803</u>	
USING HARDER SUBTRACTION FACTS						25
2. 139	116	145	1787	1591	1875	
<u>54</u>	<u>72</u>	<u>95</u>	<u>806</u>	<u>721</u>	<u>943</u>	
BORROWING FROM TENS OR HUNDREDS ONLY						27 (1)
3. 64	51	690	527	868	1233	
<u>46</u>	<u>35</u>	<u>544</u>	<u>175</u>	<u>292</u>	<u>471</u>	
DOUBLE BORROWING						27
4. 653	332	924	1286	1675	1441	
<u>256</u>	<u>165</u>	<u>736</u>	<u>697</u>	<u>889</u>	<u>498</u>	
5. 333	573	252	435	351	242	29
<u>76</u>	<u>98</u>	<u>84</u>	<u>66</u>	<u>269</u>	<u>169</u>	
SUBTRACTING WITH ZEROS IN THE MINUEND						33
6. 400	900	608	806	402	705	
<u>216</u>	<u>482</u>	<u>175</u>	<u>342</u>	<u>293</u>	<u>167</u>	
7. 300	600	203	400	501	705	33
<u>235</u>	<u>559</u>	<u>128</u>	<u>74</u>	<u>82</u>	<u>19</u>	
SUBTRACTING DOLLARS AND CENTS						
8. \$8.34	\$15.47	\$.71	\$5.00	\$7.00		
<u>5.58</u>	<u>7.78</u>	<u>.39</u>	<u>4.91</u>	<u>.56</u>		

TELLING TIME



1. Which hand of a clock is the *hour* hand?
2. Which hand of a clock is the *minute* hand?
3. Clock A says it is 4 o'clock. Tell why.
4. Clock B says it is 30 minutes after 2 or half-past 2. Tell why.
5. Clock C says it is 15 minutes after 1 or a quarter-past 1. Tell why.
6. Clock D says it is 15 minutes to 6 or a quarter to 6. Tell why.

When the long hand moves from one number to the next number on the clock 5 minutes have passed. Start at 12 and count by 5's around the clock until you come to 12 again. How many minutes in 1 hour?

Remember

60 minutes (min.) = 1 hour (hr.)

7. Clock E says it is 10 minutes after 9. Tell why. Where is the hour hand?
8. Clock F says it is 20 minutes to 12. Tell why. Where is the hour hand?
9. How many minutes are there in $\frac{1}{2}$ hr? in $\frac{1}{4}$ hr?
10. How many minutes after 7 is a quarter after 7?
11. How many minutes to 5 is a quarter to 5?
12. Your teacher will show you a real clock. Set the hands of the clock to show: half-past 8; a quarter-past 10; a quarter to 9; 5 minutes after 6; 25 minutes after 11; 10 minutes to 2; 25 minutes to 4.



A NEW WAY TO READ AND WRITE TIME

Bobby is going to hear "The Happy Minstrels". The sign tells him the matinee begins at 3.15 p.m. This means the matinee will begin at 15 minutes after 3 in the afternoon. The letters *p.m.* mean *after noon*, or, *in the evening*. 3.15 is read "three-fifteen".

Every day begins at 12 o'clock midnight. The part of the day from then to 12 o'clock noon is called *before noon* or *morning*. The letters *a.m.* mean *before noon*, or, *in the morning*. From 12 o'clock noon to 12 o'clock midnight is called *afternoon*, and *in the evening*.

In writing time the new way (for example, 3.15) the number in front of the dot tells the hour; the numbers after the dot tell the number of minutes after the hour.

There must be two numbers after the dot to show minutes.

2.25 *p.m.* means 25 minutes after 2 in the afternoon, and is read, "two twenty-five".

11.45 *a.m.* means 45 minutes after 11 before noon (a quarter to twelve) and is read, "eleven forty-five".

6.05 *a.m.* means 5 minutes after 6 in the morning, and is read, "six-oh-five".

8.00 *p.m.* means 8 o'clock in the evening, and is read, "eight o'clock".

Read each of the following and tell what each means:

1. School begins at 9.00 a.m.; recess is at 10.45 a.m.
2. The train will leave at 7.05 a.m.

KEEPING THE TOOLS SHARP

Add. Check each exercise.

1. $\begin{array}{r} 12 \\ 5 \\ \hline \end{array}$ $\begin{array}{r} 26 \\ 3 \\ \hline \end{array}$ $\begin{array}{r} 34 \\ 4 \\ \hline \end{array}$ $\begin{array}{r} 17 \\ 6 \\ \hline \end{array}$ $\begin{array}{r} 23 \\ 8 \\ \hline \end{array}$ $\begin{array}{r} 35 \\ 9 \\ \hline \end{array}$ $\begin{array}{r} 47 \\ 8 \\ \hline \end{array}$ $\begin{array}{r} 56 \\ 5 \\ \hline \end{array}$
2. $\begin{array}{r} 24 \\ 6 \\ \hline \end{array}$ $\begin{array}{r} 19 \\ 7 \\ \hline \end{array}$ $\begin{array}{r} 68 \\ 5 \\ \hline \end{array}$ $\begin{array}{r} 88 \\ 6 \\ \hline \end{array}$ $\begin{array}{r} 29 \\ 5 \\ \hline \end{array}$ $\begin{array}{r} 46 \\ 9 \\ \hline \end{array}$ $\begin{array}{r} 76 \\ 6 \\ \hline \end{array}$ $\begin{array}{r} 39 \\ 4 \\ \hline \end{array}$
3. $\begin{array}{r} 504 \\ 275 \\ \hline \end{array}$ $\begin{array}{r} 283 \\ 605 \\ \hline \end{array}$ $\begin{array}{r} 239 \\ 446 \\ \hline \end{array}$ $\begin{array}{r} 552 \\ 763 \\ \hline \end{array}$ $\begin{array}{r} 616 \\ 487 \\ \hline \end{array}$ $\begin{array}{r} 394 \\ 836 \\ \hline \end{array}$
4. $\begin{array}{r} 627 \\ 835 \\ \hline \end{array}$ $\begin{array}{r} 873 \\ 388 \\ \hline \end{array}$ $\begin{array}{r} 494 \\ 563 \\ \hline \end{array}$ $\begin{array}{r} 256 \\ 959 \\ \hline \end{array}$ $\begin{array}{r} 879 \\ 957 \\ \hline \end{array}$ $\begin{array}{r} 645 \\ 898 \\ \hline \end{array}$
5. $\begin{array}{r} 2 \\ 7 \\ 5 \\ 6 \\ 3 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ 6 \\ 7 \\ 8 \\ 4 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ 4 \\ 8 \\ 6 \\ 9 \\ \hline \end{array}$ $\begin{array}{r} 4 \\ 7 \\ 6 \\ 9 \\ 7 \\ \hline \end{array}$ $\begin{array}{r} 28 \\ 6 \\ 4 \\ 7 \\ 7 \\ \hline \end{array}$ $\begin{array}{r} 46 \\ 3 \\ 5 \\ 8 \\ 3 \\ \hline \end{array}$ $\begin{array}{r} 37 \\ 8 \\ 4 \\ 7 \\ 6 \\ \hline \end{array}$ $\begin{array}{r} 55 \\ 9 \\ 5 \\ 9 \\ 4 \\ \hline \end{array}$
6. $\begin{array}{r} 35 \\ 93 \\ 57 \\ 70 \\ 53 \\ \hline \end{array}$ $\begin{array}{r} 52 \\ 99 \\ 67 \\ 45 \\ 90 \\ \hline \end{array}$ $\begin{array}{r} 78 \\ 49 \\ 87 \\ 33 \\ 78 \\ \hline \end{array}$ $\begin{array}{r} 27 \\ 96 \\ 45 \\ 56 \\ 72 \\ \hline \end{array}$ $\begin{array}{r} 73 \\ 42 \\ 60 \\ 99 \\ 70 \\ \hline \end{array}$ $\begin{array}{r} 89 \\ 88 \\ 28 \\ 56 \\ 69 \\ \hline \end{array}$ $\begin{array}{r} 97 \\ 37 \\ 93 \\ 64 \\ 73 \\ \hline \end{array}$
7. $\begin{array}{r} 623 \\ 503 \\ 340 \\ 804 \\ 225 \\ \hline \end{array}$ $\begin{array}{r} 283 \\ 731 \\ 984 \\ 230 \\ 891 \\ \hline \end{array}$ $\begin{array}{r} 665 \\ 594 \\ 432 \\ 845 \\ 288 \\ \hline \end{array}$ $\begin{array}{r} 58 \\ 772 \\ 67 \\ 606 \\ 749 \\ \hline \end{array}$ $\begin{array}{r} 36 \\ 807 \\ 419 \\ 706 \\ 45 \\ \hline \end{array}$ $\begin{array}{r} 635 \\ 878 \\ 20 \\ 76 \\ 795 \\ \hline \end{array}$
8. $\begin{array}{r} \$.44 \\ .92 \\ .50 \\ .48 \\ .52 \\ \hline \end{array}$ $\begin{array}{r} \$.46 \\ .69 \\ .05 \\ .37 \\ .25 \\ \hline \end{array}$ $\begin{array}{r} \$3.84 \\ .67 \\ 7.90 \\ .79 \\ 3.81 \\ \hline \end{array}$ $\begin{array}{r} \$.87 \\ 9.49 \\ 5.47 \\ 8.94 \\ .43 \\ \hline \end{array}$ $\begin{array}{r} \$.26 \\ 9.62 \\ 8.03 \\ .27 \\ 3.04 \\ \hline \end{array}$

KEEPING THE TOOLS SHARP

Subtract. Check each exercise.

1. $\begin{array}{r} 597 \\ 162 \\ \hline \end{array}$ $\begin{array}{r} 739 \\ 307 \\ \hline \end{array}$ $\begin{array}{r} 473 \\ 326 \\ \hline \end{array}$ $\begin{array}{r} 572 \\ 190 \\ \hline \end{array}$ $\begin{array}{r} 283 \\ 193 \\ \hline \end{array}$ $\begin{array}{r} 1469 \\ 842 \\ \hline \end{array}$
2. $\begin{array}{r} 724 \\ 365 \\ \hline \end{array}$ $\begin{array}{r} 650 \\ 252 \\ \hline \end{array}$ $\begin{array}{r} 951 \\ 322 \\ \hline \end{array}$ $\begin{array}{r} 256 \\ 187 \\ \hline \end{array}$ $\begin{array}{r} 700 \\ 527 \\ \hline \end{array}$ $\begin{array}{r} 1218 \\ 513 \\ \hline \end{array}$
3. $\begin{array}{r} 952 \\ 574 \\ \hline \end{array}$ $\begin{array}{r} 838 \\ 746 \\ \hline \end{array}$ $\begin{array}{r} 609 \\ 424 \\ \hline \end{array}$ $\begin{array}{r} 300 \\ 143 \\ \hline \end{array}$ $\begin{array}{r} 984 \\ 454 \\ \hline \end{array}$ $\begin{array}{r} 1656 \\ 933 \\ \hline \end{array}$
4. $\begin{array}{r} 840 \\ 664 \\ \hline \end{array}$ $\begin{array}{r} 984 \\ 567 \\ \hline \end{array}$ $\begin{array}{r} 531 \\ 393 \\ \hline \end{array}$ $\begin{array}{r} 742 \\ 667 \\ \hline \end{array}$ $\begin{array}{r} 332 \\ 138 \\ \hline \end{array}$ $\begin{array}{r} 895 \\ 248 \\ \hline \end{array}$
5. $\begin{array}{r} 707 \\ 463 \\ \hline \end{array}$ $\begin{array}{r} 551 \\ 264 \\ \hline \end{array}$ $\begin{array}{r} 800 \\ 475 \\ \hline \end{array}$ $\begin{array}{r} 961 \\ 885 \\ \hline \end{array}$ $\begin{array}{r} 647 \\ 628 \\ \hline \end{array}$ $\begin{array}{r} 530 \\ 375 \\ \hline \end{array}$
6. $\begin{array}{r} 816 \\ 561 \\ \hline \end{array}$ $\begin{array}{r} 973 \\ 798 \\ \hline \end{array}$ $\begin{array}{r} 303 \\ 297 \\ \hline \end{array}$ $\begin{array}{r} 562 \\ 456 \\ \hline \end{array}$ $\begin{array}{r} 634 \\ 359 \\ \hline \end{array}$ $\begin{array}{r} 260 \\ 198 \\ \hline \end{array}$
7. $\begin{array}{r} 947 \\ 564 \\ \hline \end{array}$ $\begin{array}{r} 721 \\ 479 \\ \hline \end{array}$ $\begin{array}{r} 483 \\ 299 \\ \hline \end{array}$ $\begin{array}{r} 200 \\ 164 \\ \hline \end{array}$ $\begin{array}{r} 802 \\ 214 \\ \hline \end{array}$ $\begin{array}{r} 725 \\ 592 \\ \hline \end{array}$
8. $\begin{array}{r} 700 \\ 338 \\ \hline \end{array}$ $\begin{array}{r} 645 \\ 456 \\ \hline \end{array}$ $\begin{array}{r} 536 \\ 468 \\ \hline \end{array}$ $\begin{array}{r} 404 \\ 179 \\ \hline \end{array}$ $\begin{array}{r} 323 \\ 287 \\ \hline \end{array}$ $\begin{array}{r} 970 \\ 486 \\ \hline \end{array}$
9. $\begin{array}{r} 825 \\ 329 \\ \hline \end{array}$ $\begin{array}{r} 720 \\ 241 \\ \hline \end{array}$ $\begin{array}{r} 945 \\ 347 \\ \hline \end{array}$ $\begin{array}{r} 501 \\ 498 \\ \hline \end{array}$ $\begin{array}{r} 983 \\ 685 \\ \hline \end{array}$ $\begin{array}{r} 400 \\ 359 \\ \hline \end{array}$
10. $\begin{array}{r} \$9.87 \\ 1.35 \\ \hline \end{array}$ $\begin{array}{r} \$15.34 \\ 7.26 \\ \hline \end{array}$ $\begin{array}{r} \$18.18 \\ 9.58 \\ \hline \end{array}$ $\begin{array}{r} \$.75 \\ .46 \\ \hline \end{array}$ $\begin{array}{r} \$.90 \\ .23 \\ \hline \end{array}$ $\begin{array}{r} \$4.51 \\ 2.76 \\ \hline \end{array}$
11. $\begin{array}{r} \$3.23 \\ 2.29 \\ \hline \end{array}$ $\begin{array}{r} \$2.00 \\ 1.53 \\ \hline \end{array}$ $\begin{array}{r} \$8.22 \\ 4.76 \\ \hline \end{array}$ $\begin{array}{r} \$13.61 \\ 8.53 \\ \hline \end{array}$ $\begin{array}{r} \$7.07 \\ 3.78 \\ \hline \end{array}$ $\begin{array}{r} \$.46 \\ .17 \\ \hline \end{array}$

GETTING THE CORRECT ANSWER TO PROBLEMS

The most important thing you have to learn in arithmetic is *how to work problems correctly*.

If you follow the steps below they will help you to get the correct answer to problems.

1. **Understand the Problem.** Read the problem carefully. Get a picture in your mind of what the problem says.
2. **What Does the Problem Tell Me?**
3. **What Does the Problem Ask Me to Find?**
4. **What Numbers Must I Work with?**
5. **What Must I Do with the Numbers?** Must I add, subtract, multiply, or divide?
6. **Check the Work.**

1. In a baseball game the Reds scored 9 runs and the Blues scored 7 runs. How many runs were scored altogether?

2. Lulu had 15 cents in her pocket. She did not know there was a hole in the pocket and she lost 8 cents. How many cents did she have left?

3. Mr. White knew he would have to buy 17 tons of coal during the winter. If he bought 8 tons early in the fall, how many more tons of coal would he have to buy later?

4. Allan had 25 cents in his bank. He earned 8 cents running errands and put these in his bank also. How many cents did he have in his bank then?

5. Four boys went fishing on the holiday. Joe caught 8 fish, Bill caught 7, Tom caught 9, and George caught 6. How many fish did the four boys catch altogether?

GETTING THE CORRECT ANSWER TO PROBLEMS

6. 83 Boys Scouts went to a camp last summer. Only 47 of them could swim. How many boys were there who had to learn to swim?

7. Mary liked to look neat. She spent 35¢ for a hair ribbon and 25 cents for a baretté. How much did she spend?

8. Mr. Young bought two horses for farm work. He paid \$165 for one horse and \$148 for the other. How much did he pay for the two horses?

9. Jean weighs 90 pounds and her sister weighs 67 pounds. How many pounds heavier is Jean than her sister?

10. Leo and Tony are newsboys. Last week Leo sold 326 papers and Tony sold 197 papers. How many papers did the two boys sell?

11. Winnie and Freda are reading the same book. Winnie has read 162 pages and Freda has read 98 pages. How many more pages has Winnie read than Freda?

12. Jim saved \$4.75 during his summer holidays. When school started he bought a pair of shoes which cost him \$3.87. How much money did he have left?

13. Paul's father repaired the kitchen screen door during the summer. He paid \$1.45 for screen, \$.40 for hinges, \$.15 for screws, and \$.25 for a spring. How much did he pay for these things?

14. Helen saw two dresses in the store window. The price of one dress was \$5.00 and the price of the other was \$3.89. What was the difference in the prices of the dresses?

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